# DOCUMENT RESUME

ED 169 714 EC 114 563

| | |
|---|---|
| TITLE | Creative Prescriptions Unlimited, Grades 3-4. Evaluation Program Needs. |
| INSTITUTION | East Whittier City School District, Calif. |
| SPONS AGENCY | Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C. |
| PUB DATE | [74] |
| NOTE | 265p.; For related information, see EC 114 562-565 ; Parts may not reproduce clearly due to colored background |
| AVAILABLE FROM | East Whittier City School District, Gifted Program, 14535 E. Whittier Boulevard, Whittier, California 90605 ($8.00 each, $40.00 per set; Shipping charges are included in the price, California residents add 6% sales tax) |
| EDRS PRICE | MF01/PC11 Plus Postage. |
| DESCRIPTORS | *Academically Gifted; *Cognitive Development; *Creative Development; Divergent Thinking; Elementary Education; Gifted; Grade 3; Grade 4; *Instructional Materials; Problem Solving; Thought Processes |
| IDENTIFIERS | *Guilfords Structure of Intellect Model |

ABSTRACT

The document provides lesson plans for strengthening the thought processes, including problem solving and creative abilities, of third and fourth grade mentally gifted children. The lessons are organized within the five operations of the mind as defined by J. Guilford's Structure of Intellect (SOI): cognition (10 lessons), memory (6 lessons), divergent production (34 lessons), convergent production (4 lessons), and evaluation (3 lessons). All six products of the SOI model (units, classes, relations, systems, transformations, and implications) are considered; however, emphasis is placed on transformations and implications since these two products are seen to clearly relate to the creative process. Diagrammed for lessons in each of the five operations areas are the curricular objective (such as that given a maze the child will be able to find the most direct route to reach the intended goal), input (such as discuss seeing as being one of the five senses we use in "perception"), learning opportunities, media, output, evaluation, and enrichment. Included in the document are mazes, pictures, puzzles, and other worksheets to be duplicated and used with the lessons. (SBH)

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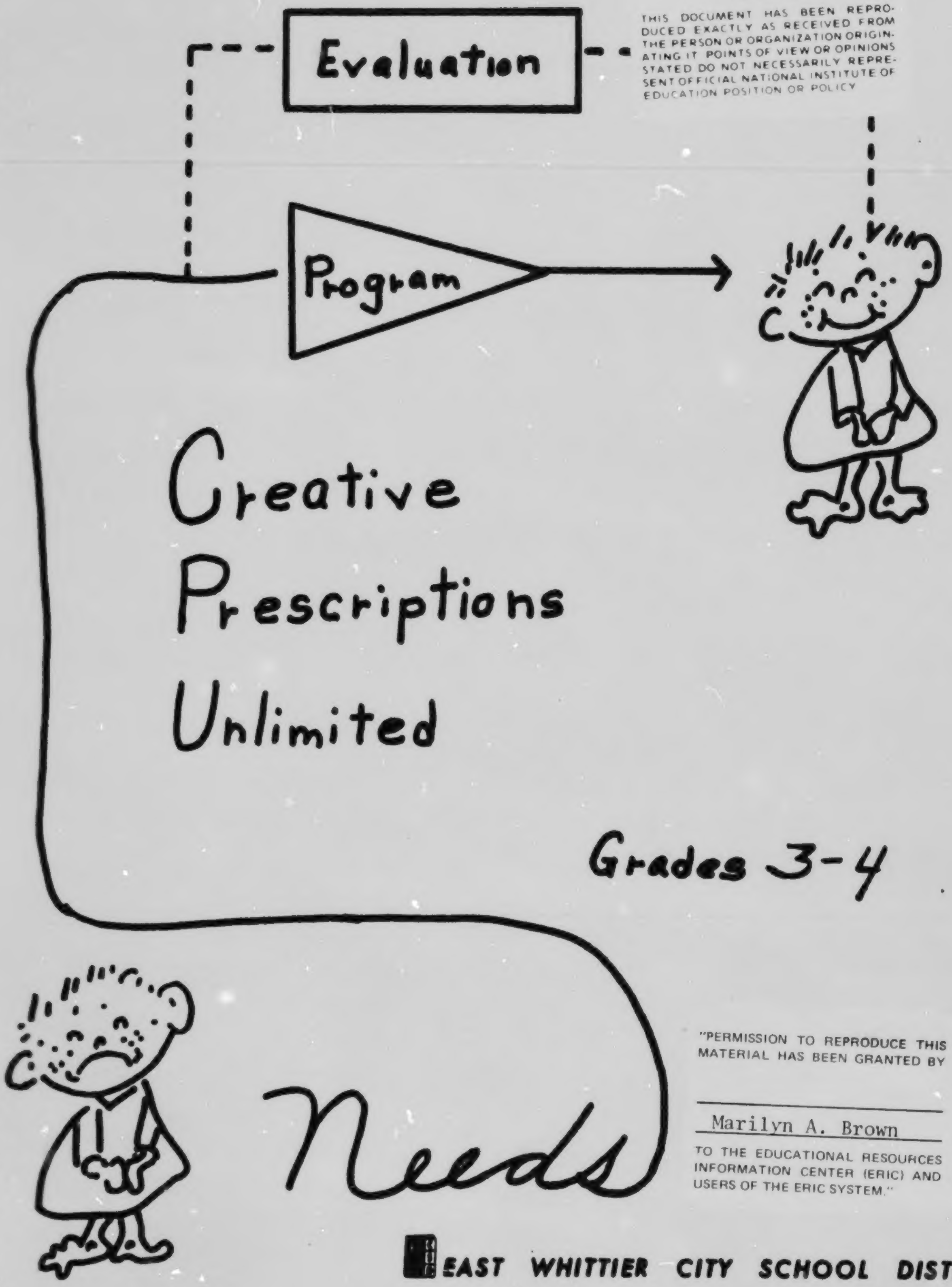

# Creative Prescriptions Unlimited

Grades 3-4

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**EAST WHITTIER CITY SCHOOL DISTRICT**

The learner is an active agent who organizes the world by labeling and grouping, noting, and establishing relationships, and by hypothesizing and predicting. Thus the pupil creates his own world and is not totally dependent upon his world to shape and mold him. Yet, in order to create the kind of environment conducive to learning and mental health, certain conditions are necessary. Those conditions which give rise to productive learning are qualitatively and quantitatively rich experiences; human support and responsiveness to others; and, opportunities for the learner to mediate those experiences through conversation. The school may, and perhaps even must, provide all three of these conditions in order to make possible change in one's cognitive field and in one's behavior.

- Marie Hughes

East Whittier City School District

## ACKNOWLEDGMENTS

We wish to express sincere appreciation to all those who gave so generously of their time and effort in the preparation and implementation of this creative problem-solving program based on the Structure of Intellect model.

Special thanks goes to the four resource teachers who developed the curriculum for the program:

Janice Allen
Marilyn Brown
Helen Clements
Ardith Johnson

and to the secretaries, Deede Boyer and Selma Bergen, who made rough copy look beautiful.

Much gratitude goes to the hardworking publications staff for their effort and interest in producing this project.

Sincere appreciation goes to the library staff for their help in cataloging and distributing materials.

We wish also to thank the publishers of commercial materials from which we have drawn in developing these lessons. A bibliography of valuable sources appears in the back of this guide.

We are deeply grateful to Bob Fraser, principal of Mar Vista School, and to his staff. Their support and assistance in the initial implementation of the program was outstanding. We wish also to thank the many parent volunteers at Mar Vista School for a very valuable contribution.

Also, we wish to thank the principals and those teachers at Granada School, Scott Avenue School, and C.T. Samuels School who implemented this program into their classrooms during the 1973-1974 school year.

We deeply appreciate the guidance we have received from the consultants on this project:

Dr. Mary N. Meeker
Director of Training
for Psychologists and Psychometrists
Loyola University
Los Angeles, California

Dr. Ralph Hoepfner
Director
Educational Evaluation Association
UCLA
Los Angeles, California

and Dr. J.P. Guilford whose valuable research is the basis for this program.

Special appreciation is expressed to Ron Salo, Coordinator of Educational Support Services, for his constant encouragement and support.

And a very special thank you to the boys and girls in the District who have worked with the lessons and have practiced creative problem solving skills.

And, finally our sincere thanks is extended to the members of the Board of Education of the East Whittier City School District who made this project, "Developing Divergent Modes of Thinking" possible.

Keith B. Walton

Keith B. Walton, Superintendent

Eleanor M. Manning

Eleanor M. Manning, Director
ESEA Title III
Developing Divergent Modes of Thinking

# FOREWARD

Creative Prescriptions Unlimited (CPU) has been designed in an effort to help teachers find new ways to strengthen the thought processes of boys and girls and to develop more effective modes for solving problems.

The common thread of education is the development of the ability to think. The values and skills of thinking do not accrue automatically; do not develop by themselves. The natural capacities possessed by everyone need training and development.

As we worked with our boys and girls we felt that they were not using their fine minds as proficiently as they might. We wanted to develop activities that would cause them to use the higher thought processes. Programs for educating the gifted should include training in independent thinking. A program that merely calls for the dutiful collection of facts will not achieve this goal. We wanted to find ways to help students learn to consider all sides of a question; to keep their minds open as they considered many alternative solutions, and then evaluate those solutions in the cold light of reason; to become reflective rather than impulsive in considering problems. These ideas form the nucleus for this guide.

Creative Prescriptions Unlimited is a product of an ESEA, Title III project, Developing Divergent Modes of Thinking in Mentally Gifted Children. The project was in progress in the East Whittier City School District from October 1, 1971, to June 30, 1974.

The research of Dr. J.P. Guilford and his Structure of Intellect (SOI) model have been used as the basis for this project. (See Table 1.) Dr. Mary Meeker's interpretation of this research and her design for its practical application in the classroom has been heavily relied upon.

In the project we have hypothesized that, through providing educational activities designed to strengthen the thought processes, we can help boys and girls think more effectively. The results obtained through the administration of the Torrance Tests of Creative Thinking appear to bear this out.

The lessons in this guide are organized within the five operations of the mind as defined in the SOI. These operations are: cognition, memory, evaluation, convergent production, and divergent production. Figural, symbolic, and semantic content have been used. Behavioral content is not a part of this guide. All six products: units, classes, relations, systems, transformations, and implications have been considered. However, there is an emphasis on transformations and implications, since these two products are clearly related to the creative process.

Divergent production has received the greatest emphasis in the guide. This operation is an important part of the creative process. Divergent production encompasses:

Fluency - the ability to generate a ready flow of ideas

Flexibility - the ability to use many different approaches or strategies in solving a problem; the willingness to change direction and modify given information.

Originality - the ability to produce clever, unique, and unusual responses.

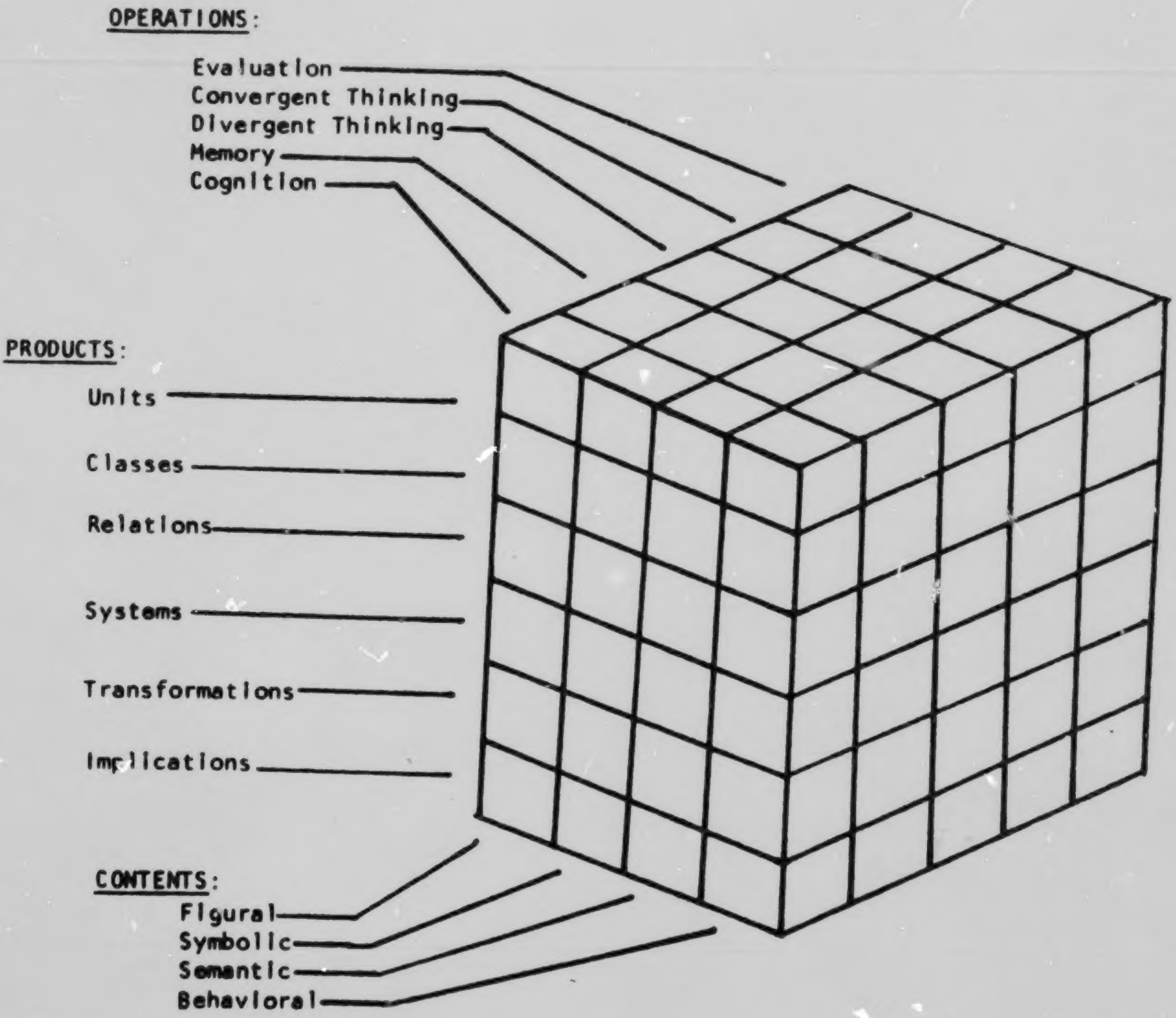
Elaboration - the ability to expand, develop and embellish one's ideas.

The divergent production section of this guide is broken down into the above four components.

Creative problem solving lessons are stressed. The creative problem solving process includes all of the five operations of the mind. (See Table 2.) It is our hope that through gaining an understanding of this process and applying it in problem solving situations, our boys and girls will be better able to function in an ever changing society.

TABLE 1

# STRUCTURE OF INTELLECT


OPERATIONS:
Evaluation
Convergent Thinking
Divergent Thinking
Memory
Cognition
PRODUCTS:
Units
Classes
Relations
Systems
Transformations
Implications
CONTENTS:
Figural
Symbolic
Semantic
Behavioral

# THE CREATIVE PROCESS

| Stages of Creative Process | Expected Form | Predominant Thinking Operation | Personality Factor or Attitude Required |
|---|---|---|---|
| desire<br>preparation | neat<br>well-organized<br>well-stated | cognition<br>memory | curiosity<br>complexity<br>studiousness<br>sustained attention |
| manipulation<br>incubation<br>intimation<br>illumination | sloppy<br>often confused<br>incoherent | divergent thinking | imagination<br>intellectual freedom<br>risk taking<br>tolerance of failure and ambiguity |
| verification | neat<br>well-organized<br>clearly stated | convergent thinking<br>evaluative thinking | intellectual discipline<br>following logical sequence |

TABLE 2

## DEFINITIONS OF FACTORS COMPOSING THE STRUCTURE OF INTELLECT

### MAJOR PROCESSES

Intellectual operations which the mind does with the raw materials of information.

| | | |
|---|---|---|
| C | COGNITION: | Discovery, awareness, rediscovery, or recognition of information in various forms; comprehension; understanding. |
| M | MEMORY: | Retention of information in any form. |
| N | CONVERGENT PRODUCTION: | Generation of information from given information, where emphasis is upon reproducing conventionally accepted best answers or outcomes. |
| D | DIVERGENT PRODUCTION: | Generation of information from given information, where the emphasis is upon the variety and quality of answers. This operation is closely related to the creative process. |
| E | EVALUATION: | Reaching decisions or making judgments concerning the correctness, suitability, adequacy, desirability of information, in terms of identity, consistency, and goal satisfaction. |

### CONTENTS

General varieties of information.

| | | |
|---|---|---|
| F | FIGURAL CONTENT: | Information in a concrete form, visually, auditorially, or kinesthetically. |
| S | SYMBOLIC CONTENT: | Information in the form of signs, having no significance in and of themselves, such as letters, numerals, musical notes. |
| M | SEMANTIC CONTENT: | Information in the form of meanings to which words commonly become attached; most notable in verbal thinking. |
| B | BEHAVIORAL CONTENT: | Information essentially non-verbal, involved in human interactions, where awareness of attitudes, need, desires, intentions, thought, etc. of other processes is important. (Behavioral content is not a part of this project.) |

## PRODUCTS

Results obtained from the intellect's processing of information.

| | | |
|---|---|---|
| U | UNITS: | Segregated items of information having "thing" quality. |
| C | CLASSES: | Items of information grouped by common properties. |
| R | RELATIONS: | Recognized connections between units of information based upon variables that apply to them. |
| S | SYSTEMS: | Organized items of information; complexes of interrelated or interacting parts. |
| T | TRANSFORMATIONS: | Changes in existing or known information, or in its use; requiring the redefinition or modification of information. |
| I | IMPLICATIONS: | Extrapolations of information in the form of expectancies, predictions, and consequences. |

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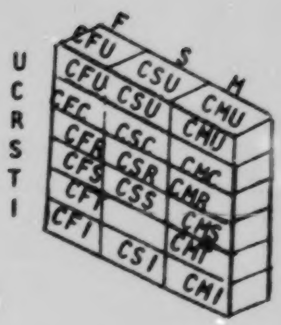


**Concept** Cognition

**Curricular Objective**

1.1 Given a set of optical illusions the child will be able to see the changes in these illusions 90% of the time.

**Input**

A discussion should take place on "Awareness of the world around us".

Ask questions eg:

1. What color are your father's eyes?
2. What kind of handles are on your kitchen cupboards?

**Learning Opportunities**

I: Play game: Children close eyes, open,--discuss what the first thing they saw was. Record and tally responses on blackboard. Discuss why more saw one object than another. Try to elicit response ("Because it has always been there".)

II: Teacher puts optical illusion on overhead projector. (See 1.1.A)

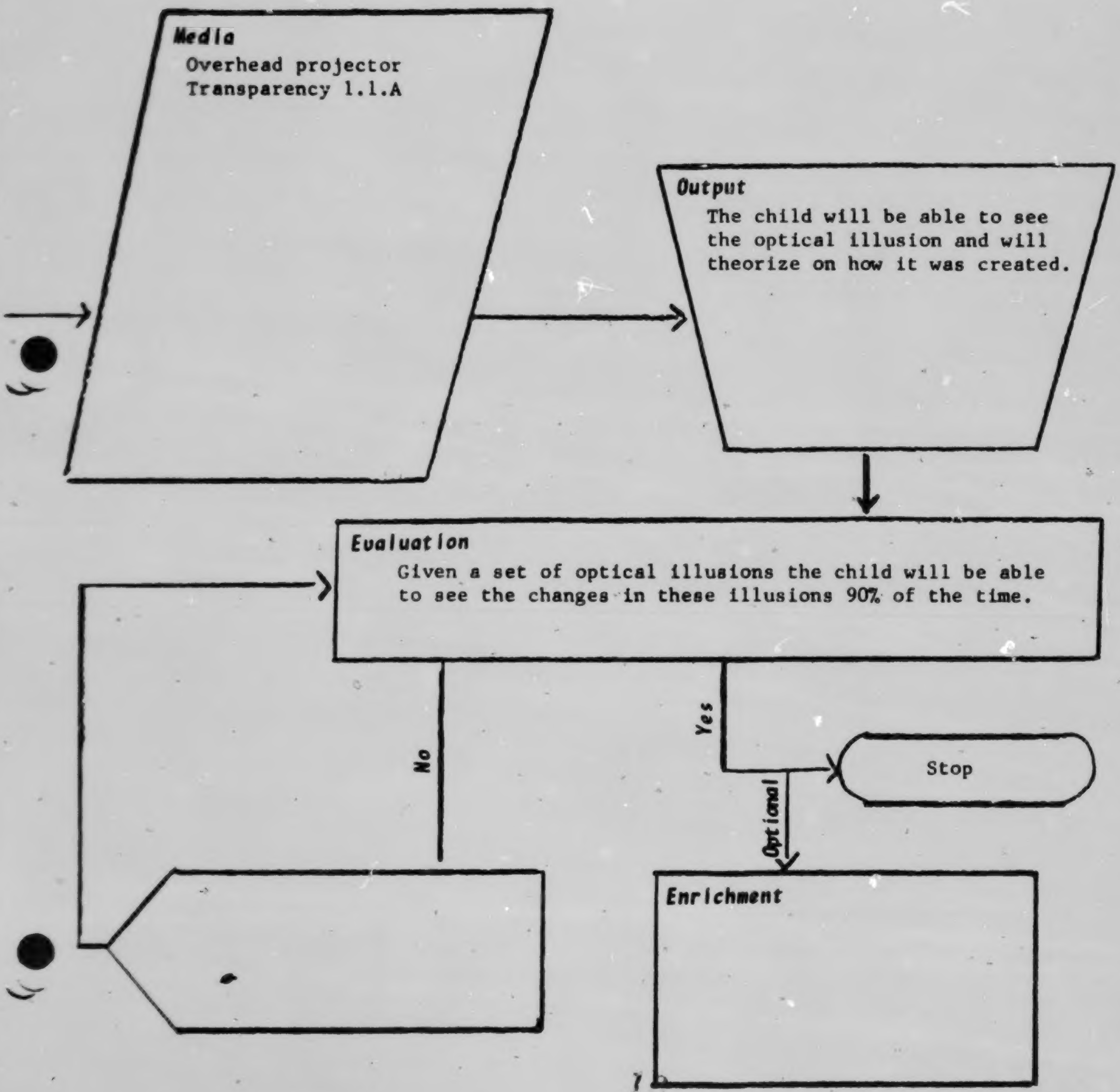
A: Ask children what it is they see.

B: Let children look at the illusion for a short time.

C: Ask if the picture changed for them and if so what it is they saw.

D: Question children as to what this picture might be called (optical illusion) and what other times do our eyes play tricks on us (mirages etc.).

E: Discuss how illusions might have been created.



**Media**

Overhead projector
Transparency 1.1.A

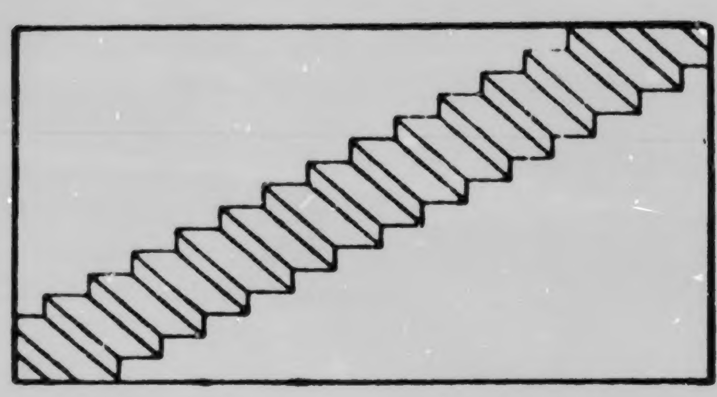
**Output**

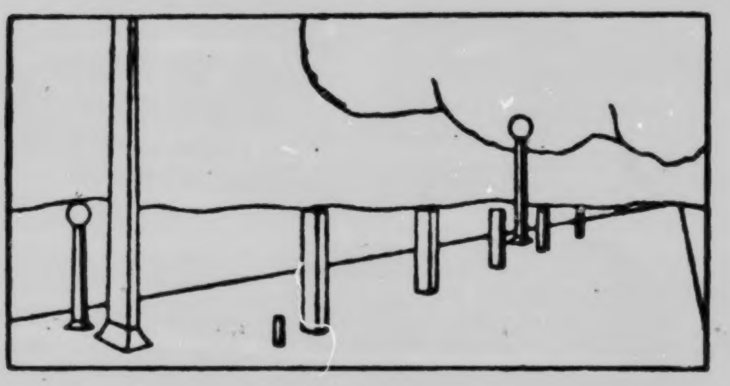
The child will be able to see the optical illusion and will theorize on how it was created.

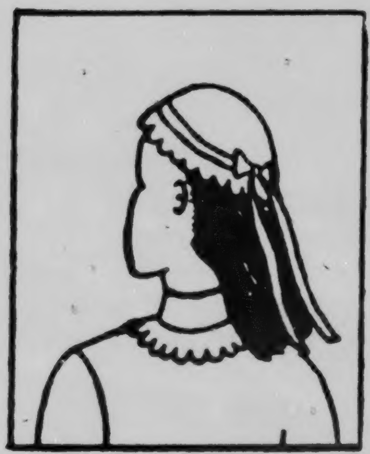
**Evaluation**

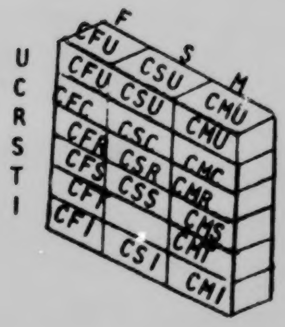
Given a set of optical illusions the child will be able to see the changes in these illusions 90% of the time.

**Enrichment**





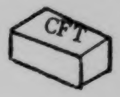




**Concept** Cognition

**Curricular Objective**

1.2 Given a set of optical illusions the child will be able to see the changes in the illusions and arrive at a theory as to how they are created.



**Input**

Show class four familiar objects and discuss what they are and their use. Show four unfamiliar objects--discuss what they might be and their use. Discuss why they were able to identify some object and not others.

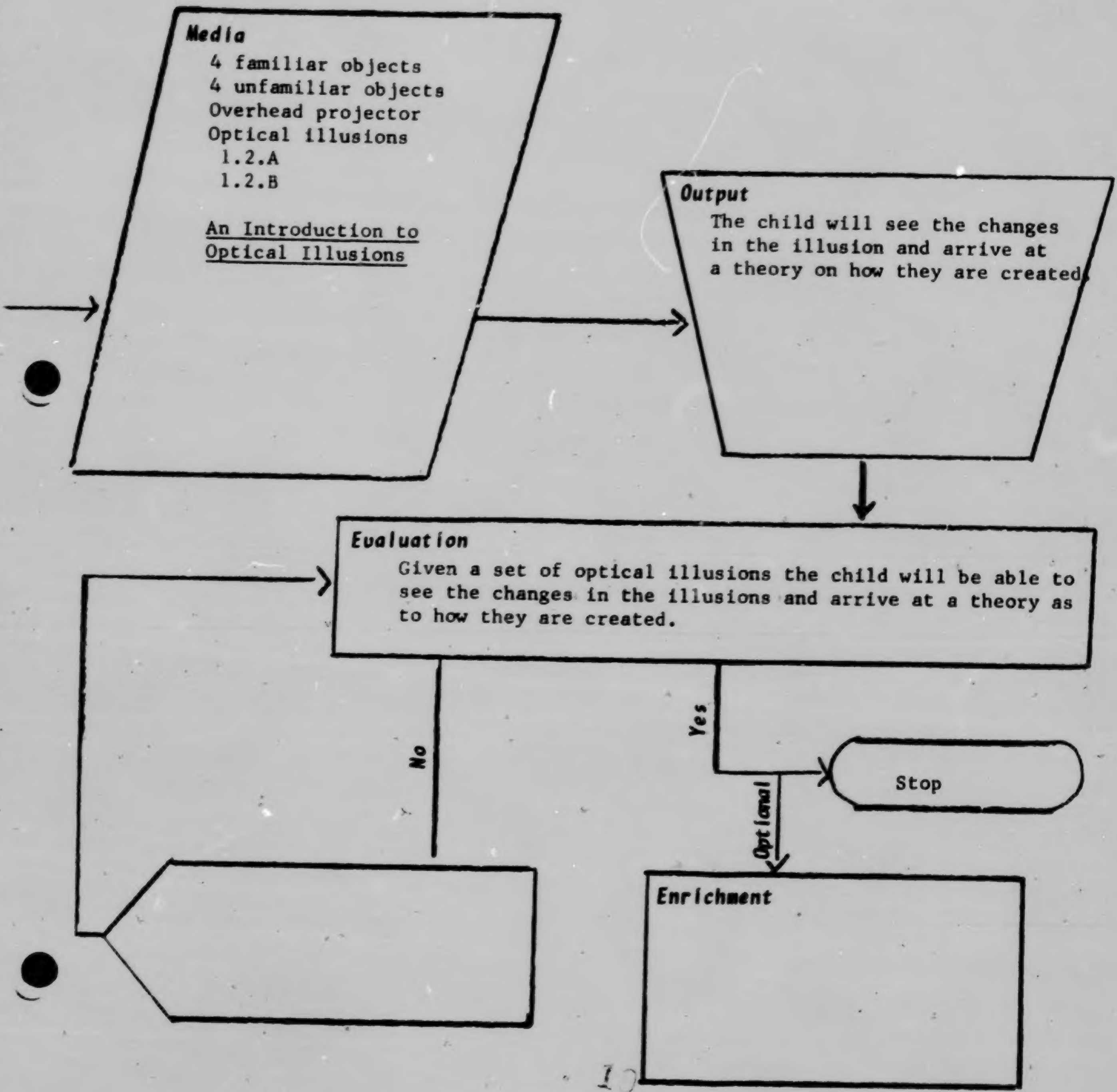
Discuss what is a "theory" and how some arrived at theirs for the unfamiliar objects.

Discuss when it is not possible to believe your eyes.

**Learning Opportunities**

I: The teacher will put the optical illusion on the overhead projector (See 1.2.A).
  A: Ask children what they see.
  B: Ask the children which circle seems larger.
  C: Measure both circles.
  D: Help children to theorize how illusion was created.

II: Show the second transparency (1.2.B)
  A: Ask children what they see.
  B: Ask the children which center circle seems larger between the two groups.
  C: Measure the inside circles to compare diameters.
  D: Help children theorize how illusion was created.



**Media**

4 familiar objects
4 unfamiliar objects
Overhead projector
Optical illusions
1.2.A
1.2.B

An Introduction to Optical Illusions

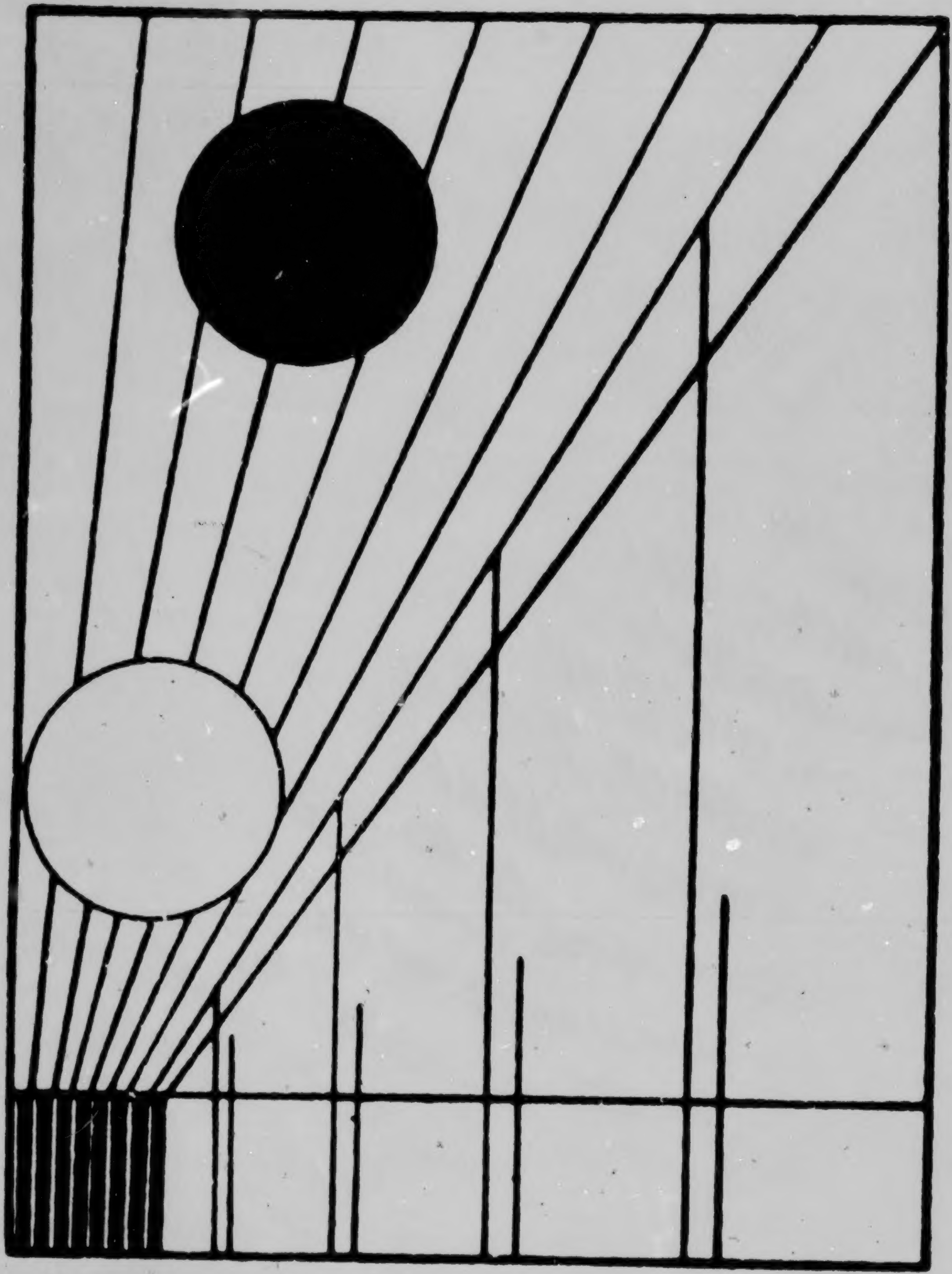
**Output**

The child will see the changes in the illusion and arrive at a theory on how they are created.

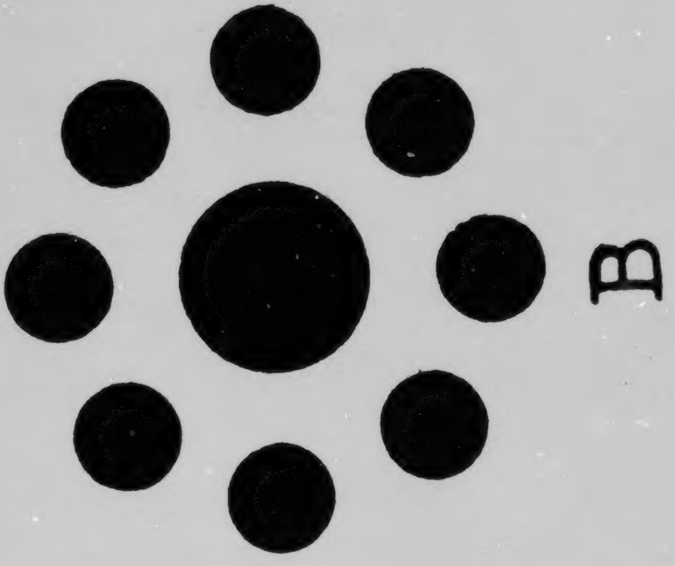
**Evaluation**

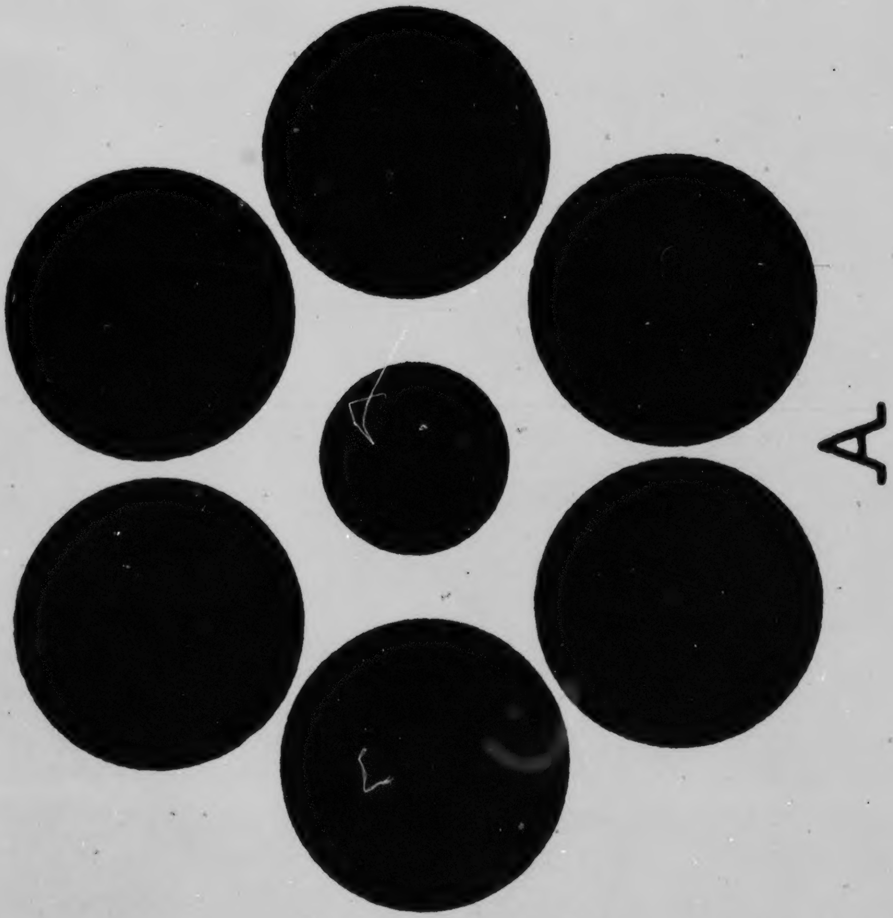
Given a set of optical illusions the child will be able to see the changes in the illusions and arrive at a theory as to how they are created.

**Enrichment**



From An Introduction to Optical Illusions, J. Weston Walch, Publisher





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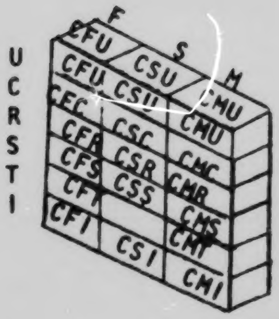
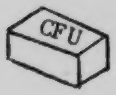


**Concept** Cognition

**Curricular Objective**

1.3 The child given oral descriptions of certain familiar objects will be able to draw the objects as well as recognize the familiar objects as described.



**Input**

A discussion of perception and how becoming more aware helps one toward becoming more creative.

**Learning Opportunities**

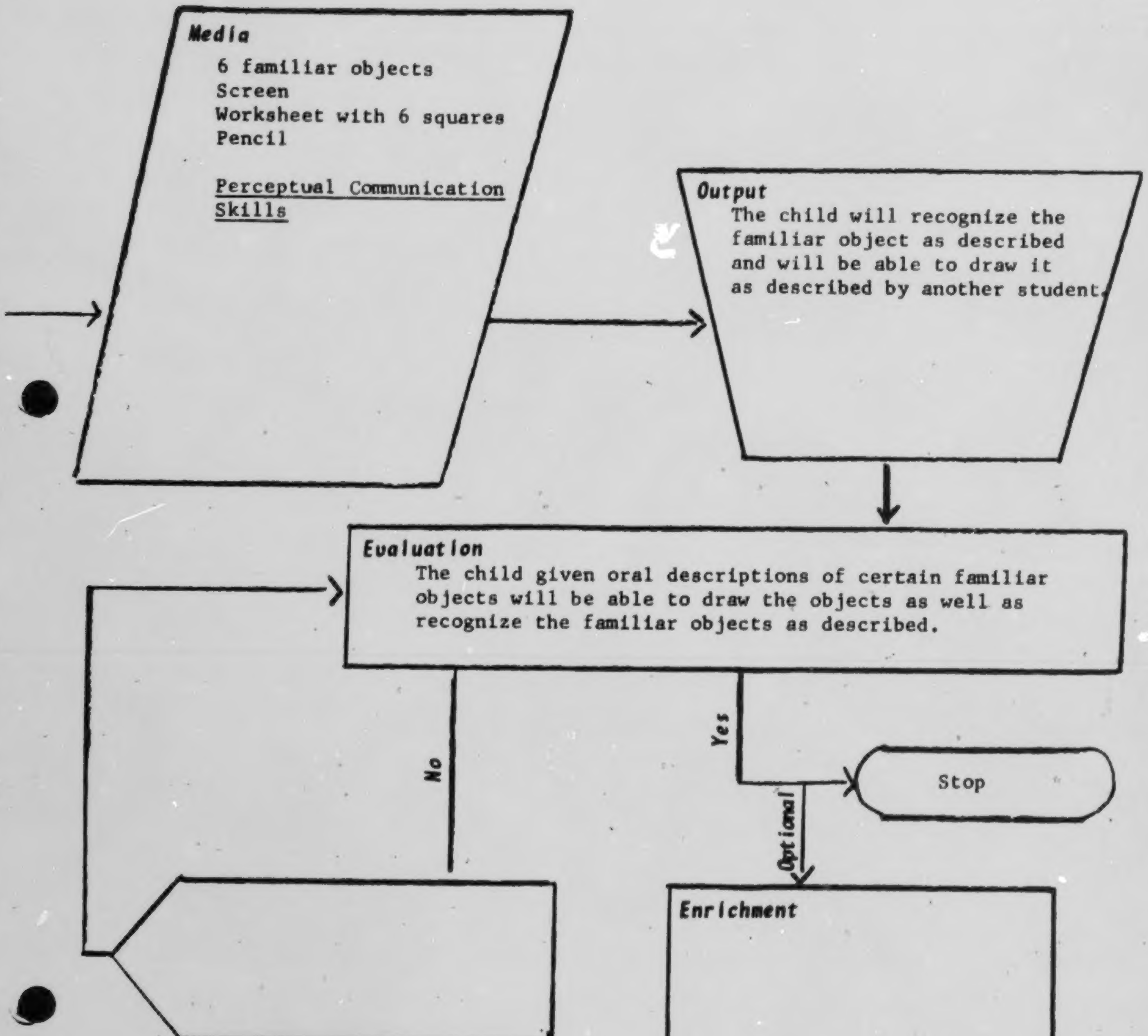
I: The teacher will set up a screen on a table behind which she places a familiar object. A worksheet is given each child on which are six squares.

A: Place student behind the screen. Child describes the object.

B: Children at their desks attempt to draw object as described by child in first square.

C: First child behind screen is replaced by another one and the same procedure is repeated for the remaining five squares.

D: At the conclusion children discuss what their drawings represent.



**Media**

6 familiar objects
Screen
Worksheet with 6 squares
Pencil

Perceptual Communication Skills

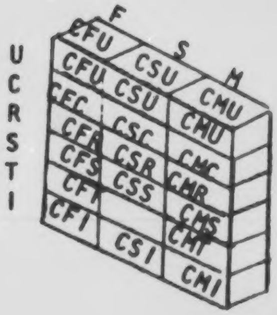
**Output**

The child will recognize the familiar object as described and will be able to draw it as described by another student.

**Evaluation**

The child given oral descriptions of certain familiar objects will be able to draw the objects as well as recognize the familiar objects as described.

**Enrichment**



**Concept** Cognition

**Curricular Objective**

1.4 The child upon hearing four sets of individual sounds will identify the sounds and create other related sounds.

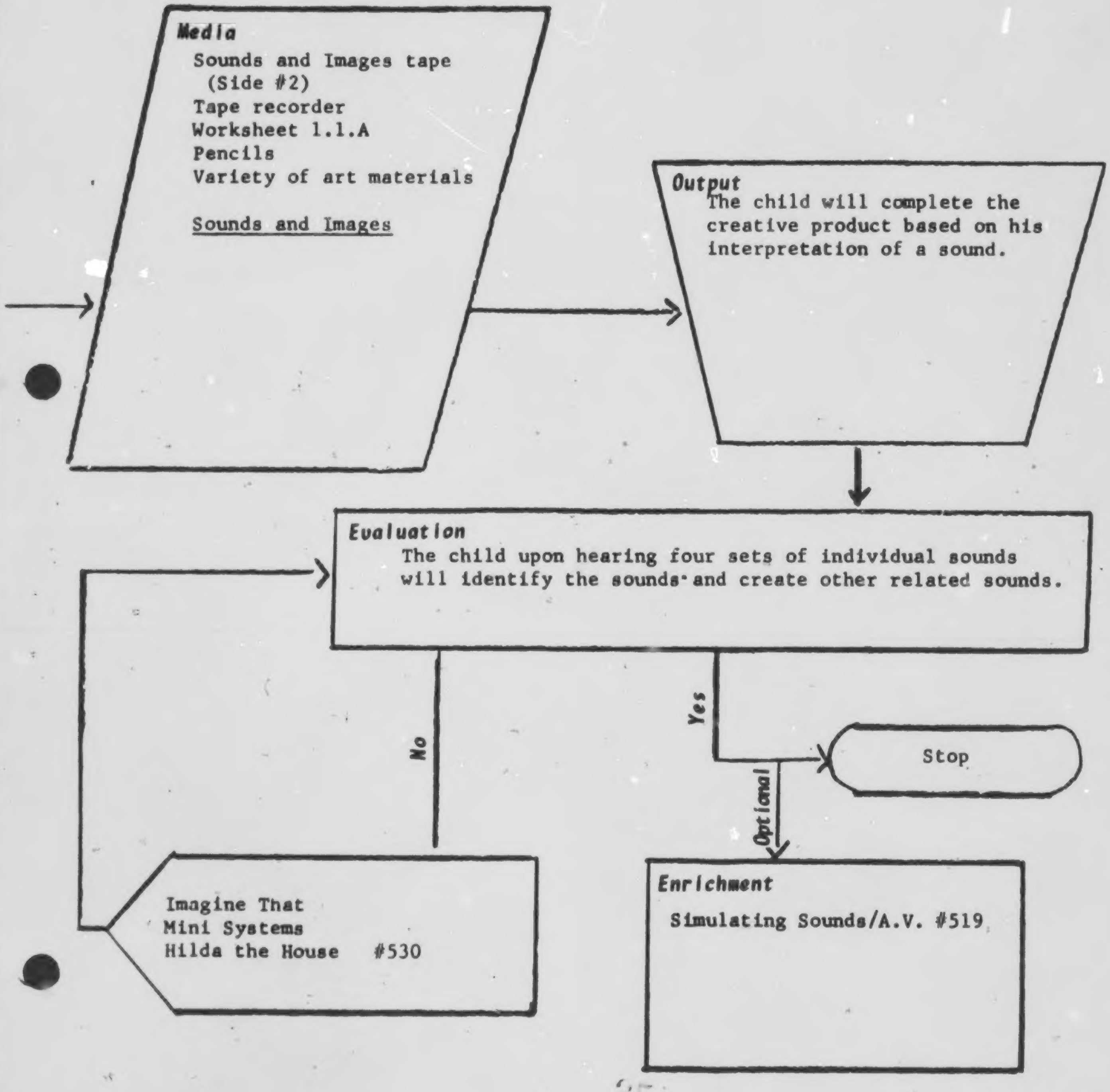
**Input**

A discussion on what is "perception". How it helps us to become more aware of our world. Through careful listening we might find ourselves more aware.

**Learning Opportunities**

I: The teacher plays the tape "Sounds and Images", Side #2. Each child is provided with a worksheet. (See 1.4.A)
  A: Children identify and record their impression of sounds on tape.
  B: Sounds are repeated and children are asked to probe their imaginations and record what else the sounds might be.
  C: Repeat number II, this time "the sky is the limit".
  D: Children select their most creative answer and illustrate as they choose.

II: Discuss with children all the ideas that come from this activity.



**Media**

Sounds and Images tape
(Side #2)
Tape recorder
Worksheet 1.1.A
Pencils
Variety of art materials

Sounds and Images

**Output**

The child will complete the creative product based on his interpretation of a sound.

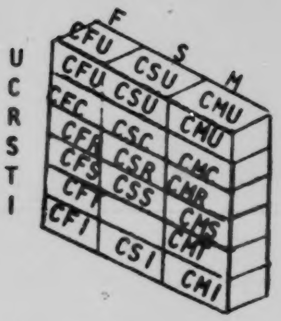
**Evaluation**

The child upon hearing four sets of individual sounds will identify the sounds and create other related sounds.

Imagine That
Mini Systems
Hilda the House #530

**Enrichment**

Simulating Sounds/A.V. #519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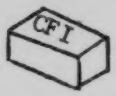
**Concept** Cognition

**Curricular Objective**

1.5 Given a maze the child will be able to find the most direct route to reach the intended goal.



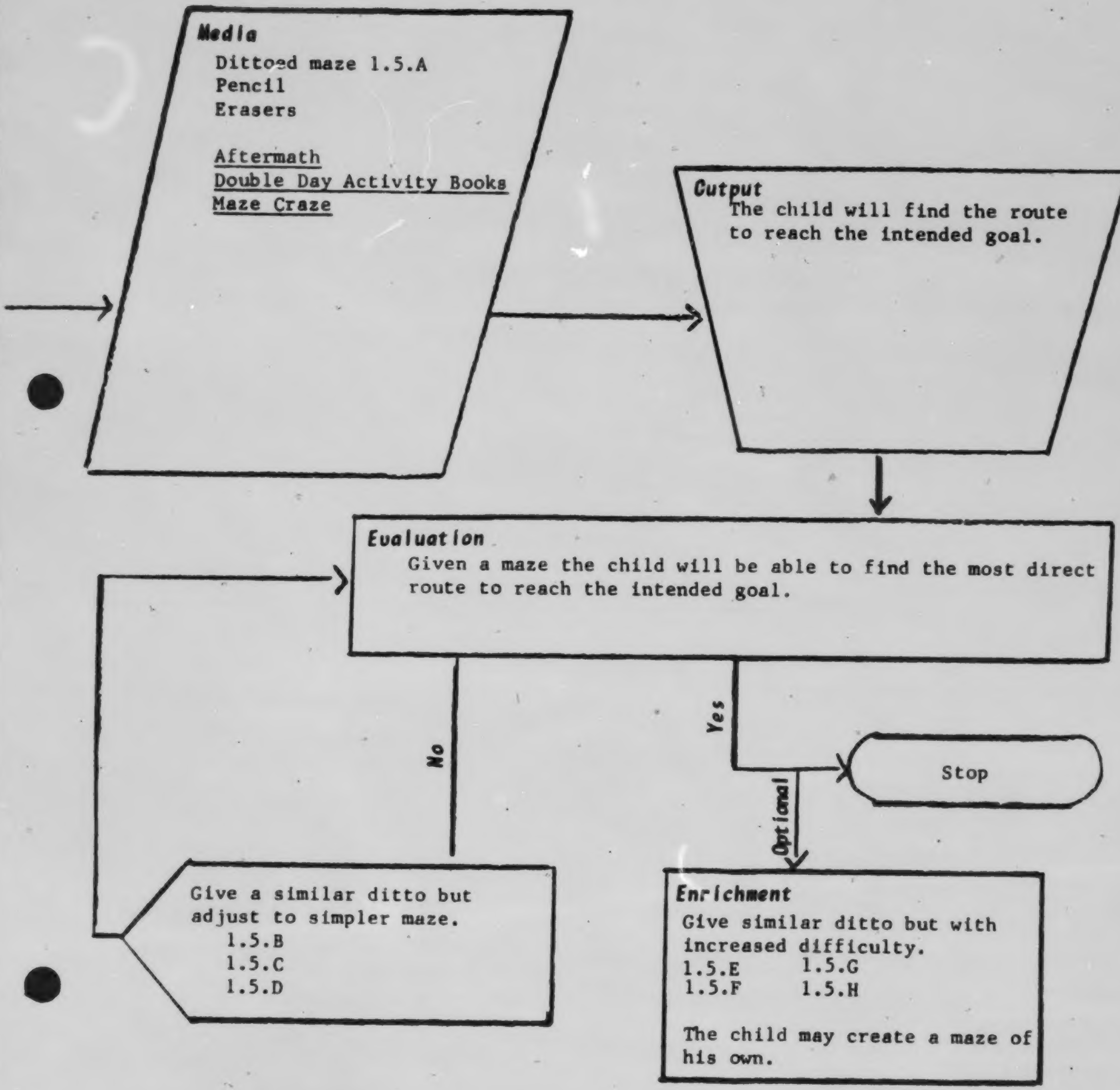
**Input**

Discuss seeing as being one of the five senses we use in "perception". That seeing takes a great deal of looking to help us become more aware of the world around us.

**Learning Opportunities**

I: The teacher presents each child a dittoed maze. (See 1.5.A)

A: The child is to follow a path to the finish without meeting any obstacles.



**Media**

Dittoed maze 1.5.A
Pencil
Erasers

Aftermath
Double Day Activity Books
Maze Craze

**Output**

The child will find the route to reach the intended goal.

**Evaluation**

Given a maze the child will be able to find the most direct route to reach the intended goal.

Give a similar ditto but adjust to simpler maze.
1.5.B
1.5.C
1.5.D

**Enrichment**

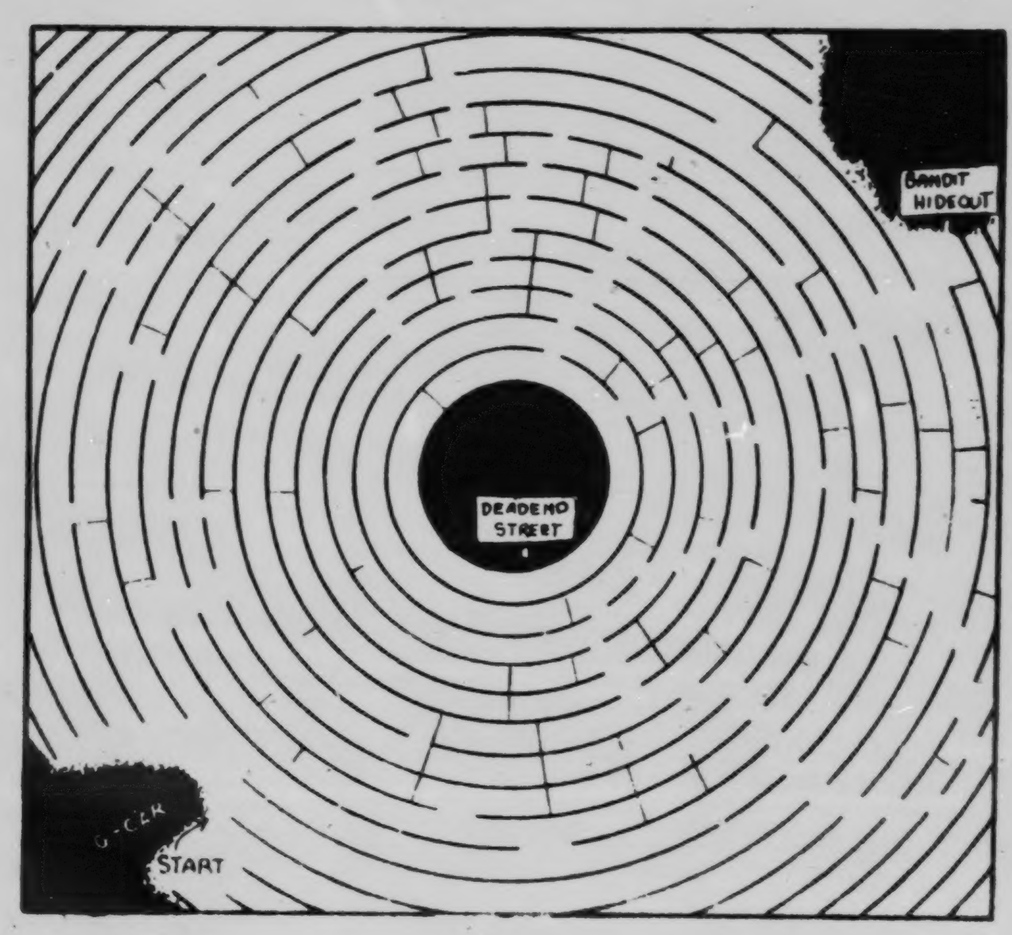
Give similar ditto but with increased difficulty.
1.5.E
1.5.F
1.5.G
1.5.H

The child may create a maze of his own.

# G-Man

## CIRCULAR MAZE

BILL STACEY is hot on the trail of some bandits. Take your pencil and start in the "G" Car. You mustn't cross any solid lines. What's the quickest route to the Bandit Hideout?


BANDIT HIDEOUT
DEADEND STREET
G-CAR
START

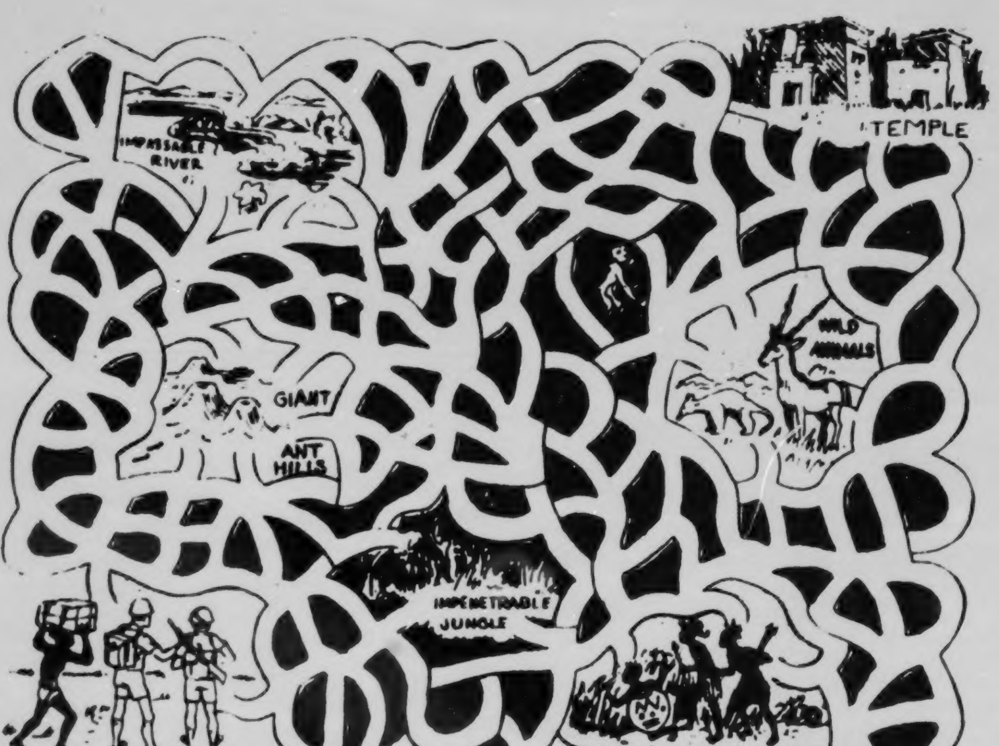
From Doubleday Activity Book, Big Book of Pencil Games,
©1962, Doubleday and Co., Inc.

# Jungle Discovery

## PICTURE PUZZLE

SIR ARTHUR COVINGHAM is off on an expedition in Africa. He is looking for the long-lost temple of the Mogjuglao tribe. Can you help him find the shrine?

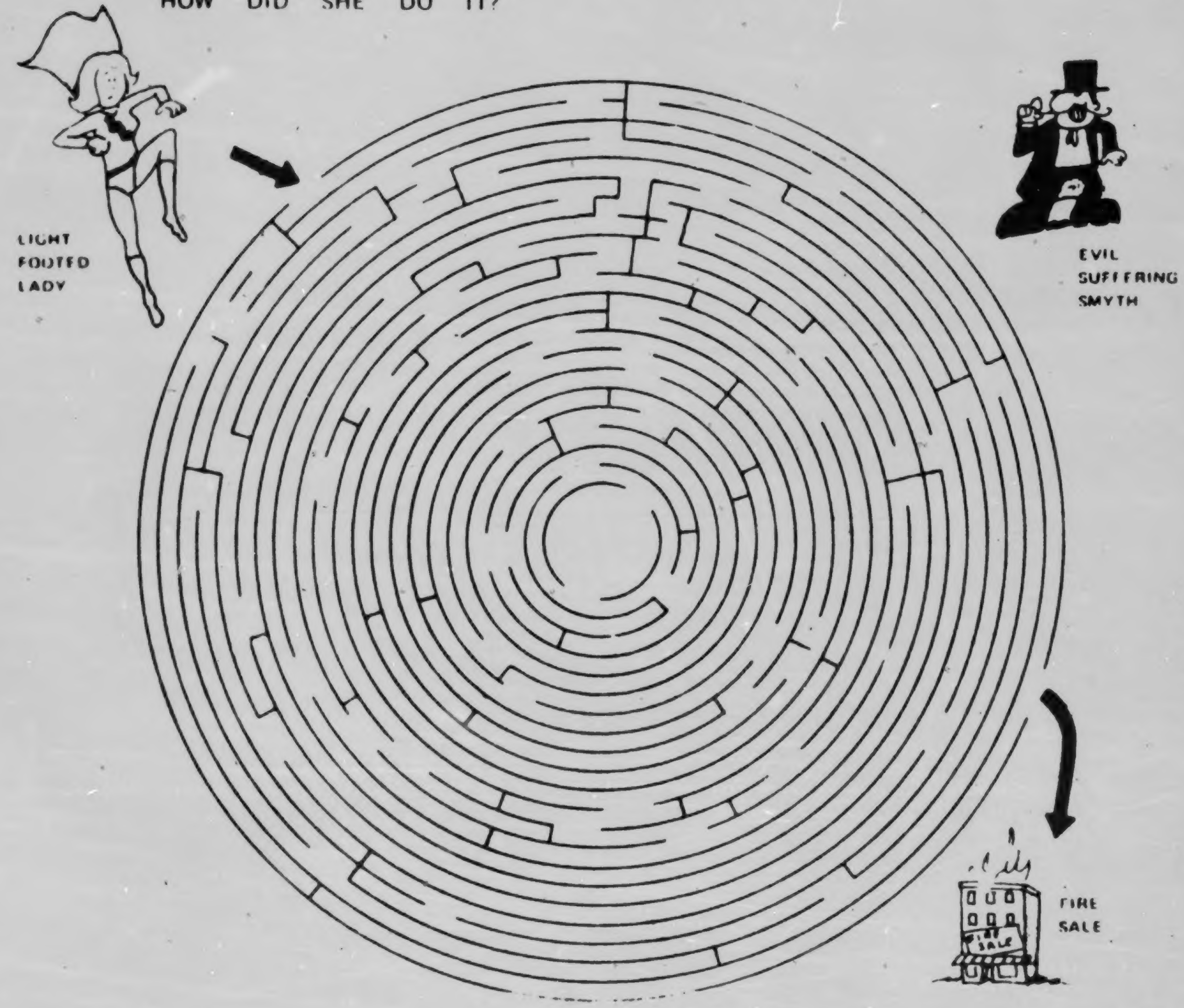
Use your pencil to trace a path from start to temple without crossing any of the lines.


TEMPLE
IMPASSABLE RIVER
GIANT
ANT HILLS
WILD ANIMALS
IMPENETRABLE JUNGLE
START
HOSTILE NATIVES

From Doubleday Activity Book, Big Book of Pencil Games, ©1962, Doubleday and Co., Inc.

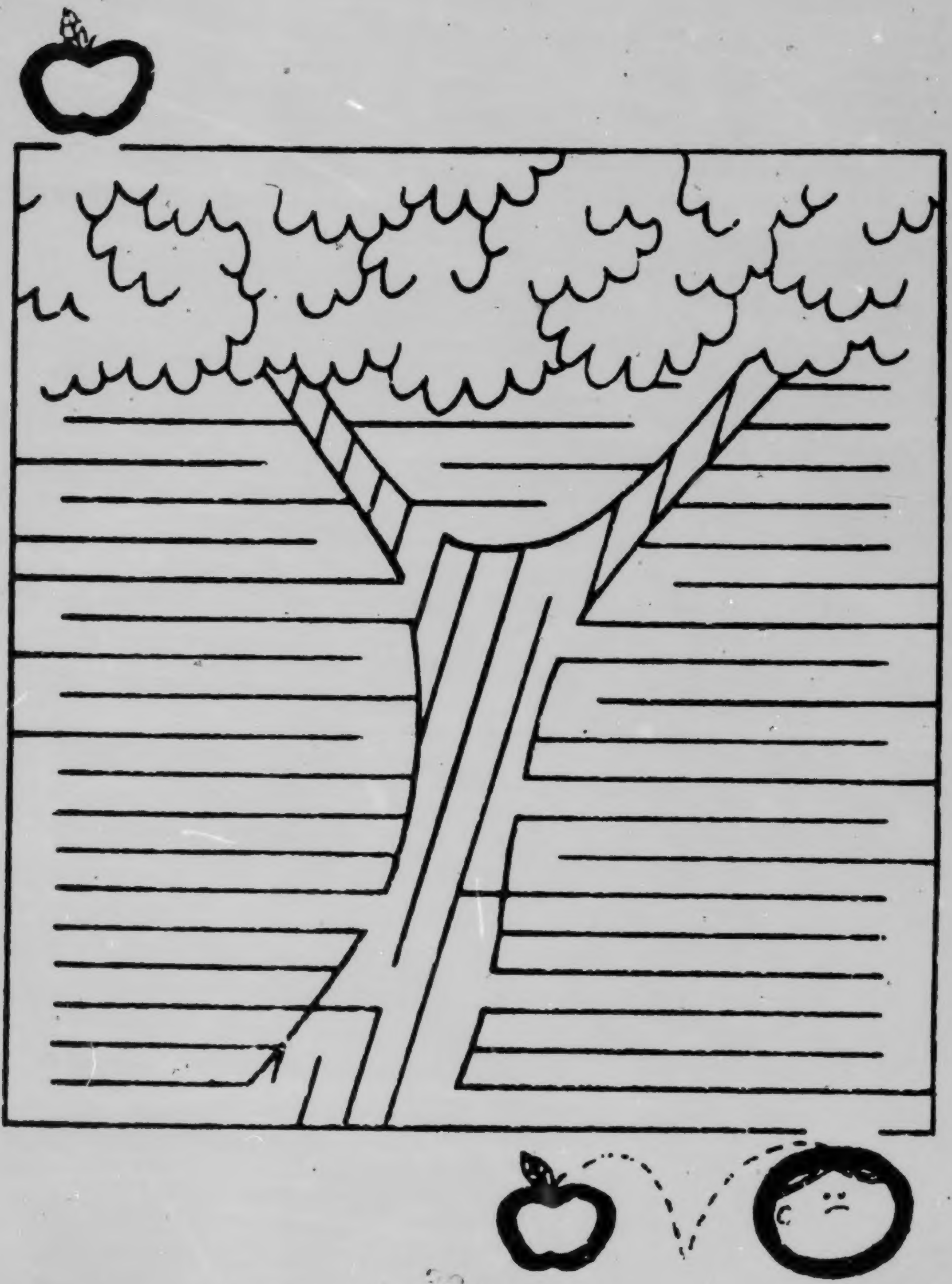
# CIRCULAR REASONING

CAROL CASHEW, MILD MANNERED SECRETARY FOR A GREAT METROPOLITAN PUBLISHING COMPANY (WHO IS, IN REALITY, "LIGHTFOOTED LADY", CHAMPION OF JUSTICE AND NEMESIS OF EVILDOERS!) WAS ON HER WAY TO PUT OUT A FIRE SALE, WHEN SHE WAS CONFRONTED BY A MAZE BUILT BY HER ARCH ENEMY, THE EVIL "SUFFERING SMYTH". NOT HESITATING, SHE WEAVED HER WAY THROUGH THE MAZE AND ARRIVED AT THE FIRE SALE IN THE NICK OF TIME. HOW DID SHE DO IT?


LIGHT FOOTED LADY
EVIL SUFFERING SMYTH
FIRE SALE
FIRE SALE

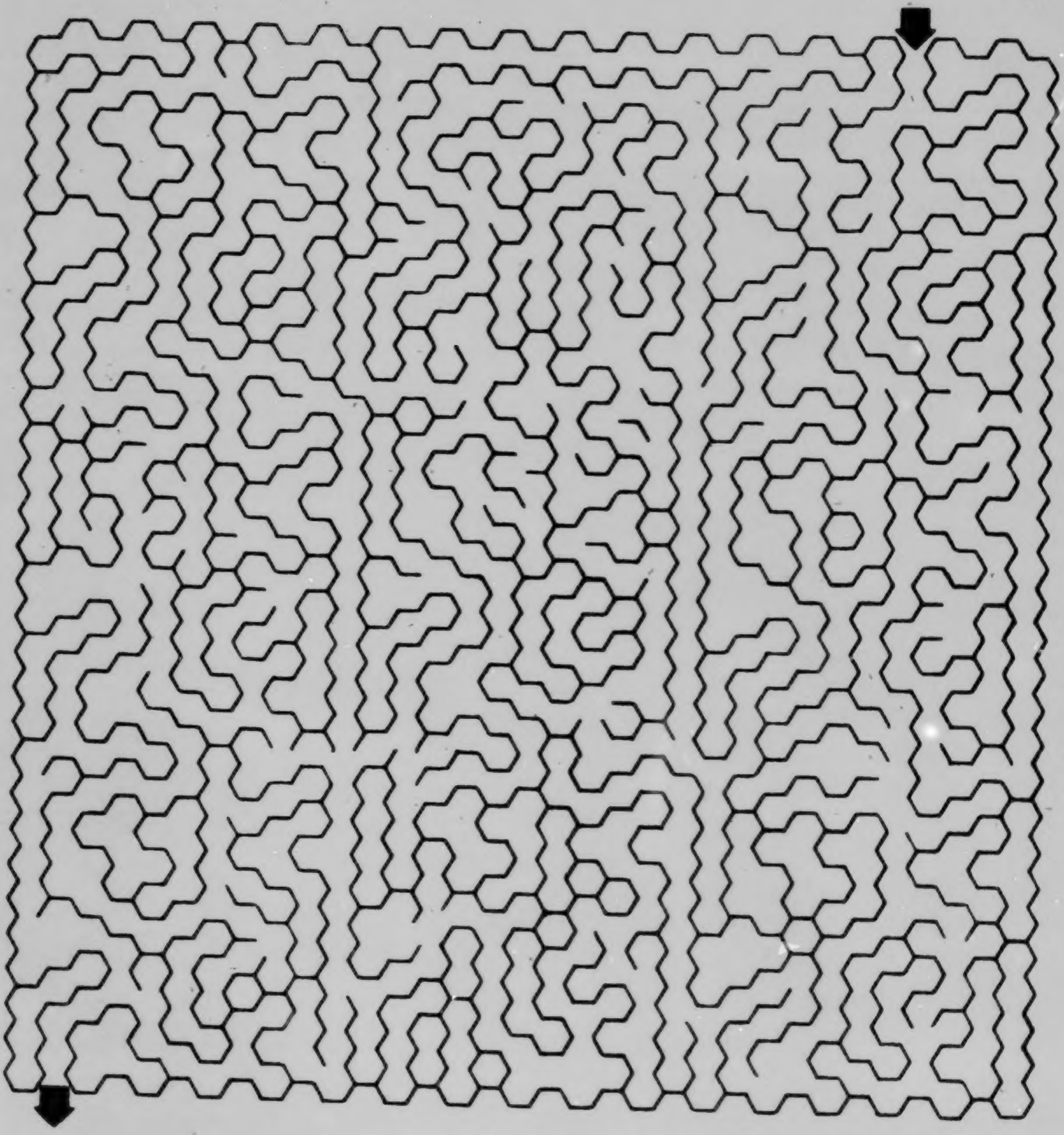
From Aftermath, Book 1, Page 66, Published by Creative Publications, Palo Alto, Ca.

Begin at the word START, and see if you can trace a path from the apple to the man's head without crossing any lines.

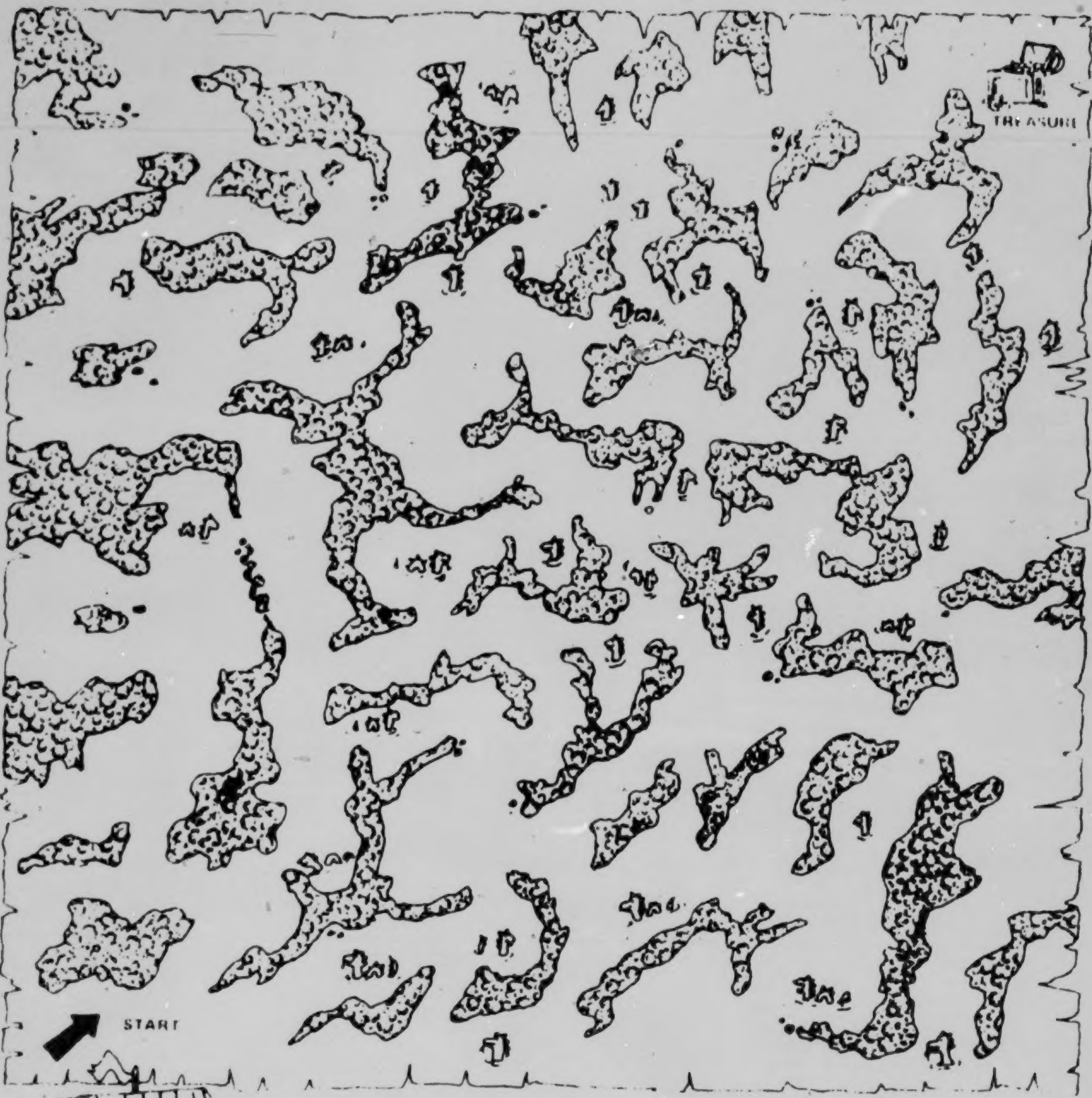


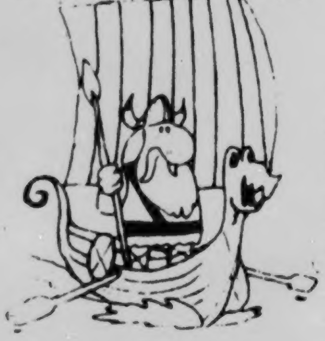
From Home Activity Series, Crosswords and Puzzles for Children #2, Dell Publishing Co., Inc. N.Y. ©1970

# TRACE THE MAZE



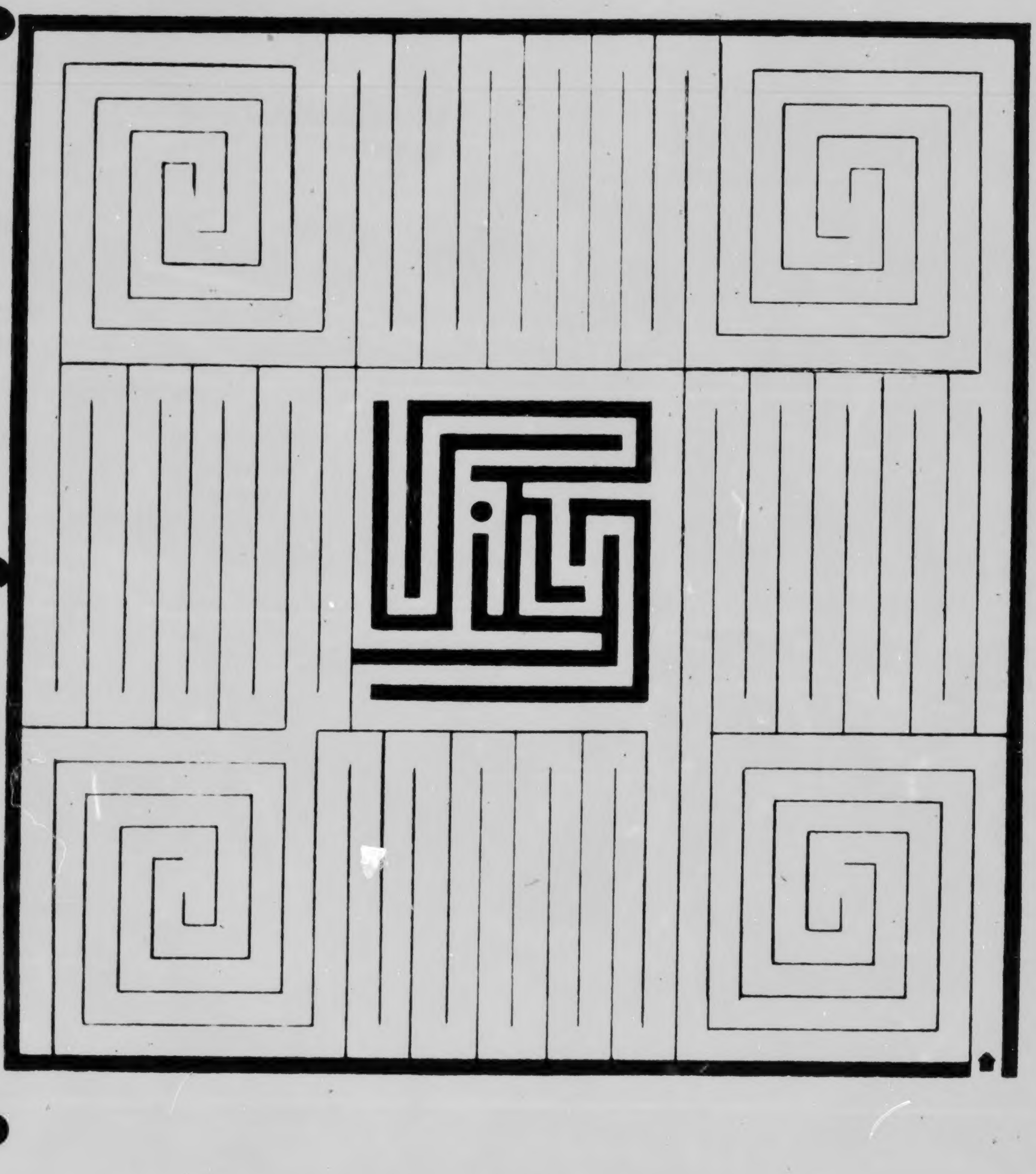
From Aftermath, Book 2, Page 16, Published by Creative Publications, Inc.,
Palo Alto, Ca. 94303



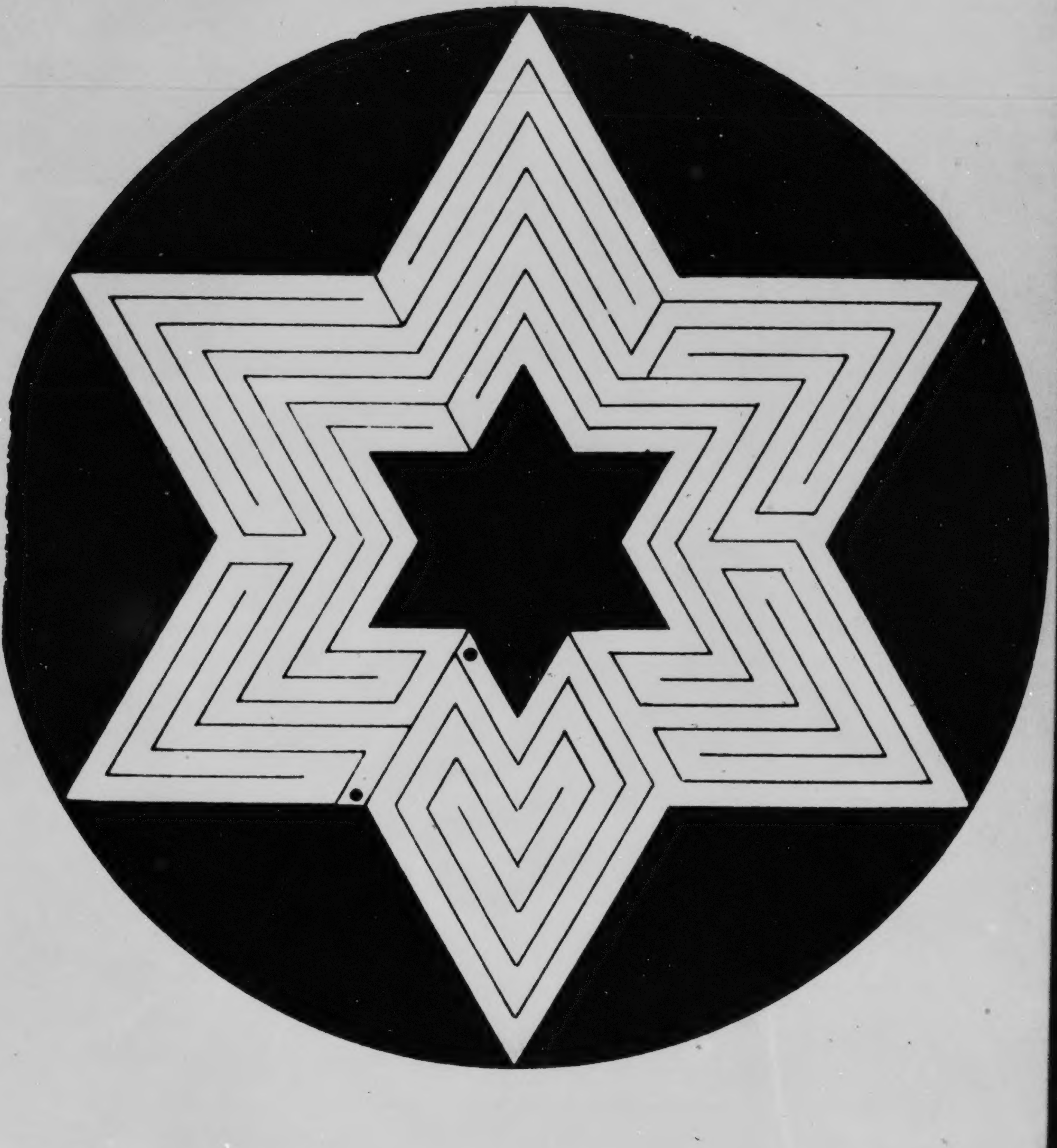


OLAF STRONGARM FOUND A TREASURE MAP. TO REACH THE TREASURE, OLAF HAD TO SAIL THROUGH A MAZE OF ISLANDS, WHICH IN ITSELF WAS NOT DIFFICULT, BUT THE WATERS NEAR THE ISLANDS WERE INFESTED WITH FIERCE SEA SERPENTS. OLAF FOUGHT THE SERPENTS OFF WITH SPEARS, BUT ONLY HAD ENOUGH SPEARS FOR TWO SERPENTS. HOW DID OLAF DO IT?

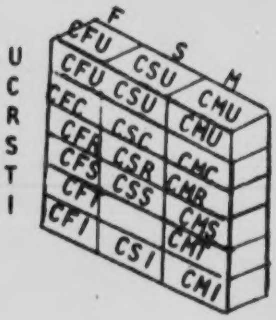
From Aftermath, Book 1, Page 48, Published by Creative Publications, Inc. Palo Alto, Ca.



Reproduced by permission from Maze Craze 1 ©1974, Troubador Press, San Francisco, Ca.



Reproduced by permission from Maze Craze 1 ©1974, Troubador Press, San Francisco, Ca.



**Concept** Cognition

**Curricular Objective**

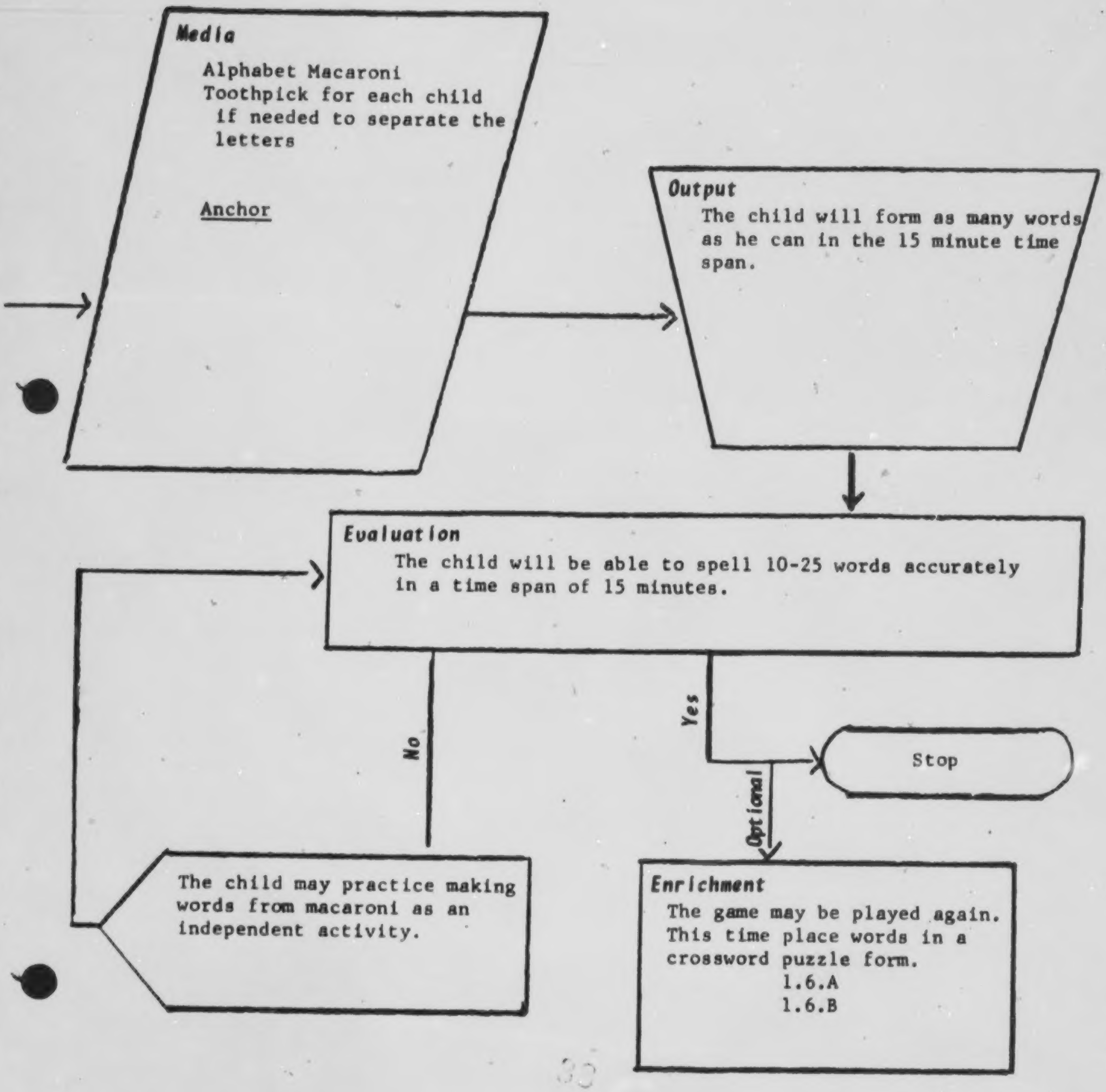
1.6 Given one teaspoon of alphabet macaroni the child will be able to spell 10-25 words accurately in a time span of 15 minutes.

**Input**

Discuss the importance of a good vocabulary and of being able to recall and use words fluently. Discuss ways of increasing our vocabulary.

**Learning Opportunities**

I: The teacher gives each child a teaspoon of alphabet macaroni.
  A: Children are given 5 minutes to form as many words as possible from the macaroni.
  B: "Begging Time" is called by the teacher. For 5 minutes children ask other children for letters they need.
  C: "Begging Time" is called off by the teacher. The children are given 5 more minutes to finish up their lists of words.



**Media**

Alphabet Macaroni
Toothpick for each child if needed to separate the letters

Anchor

**Output**

The child will form as many words as he can in the 15 minute time span.

**Evaluation**

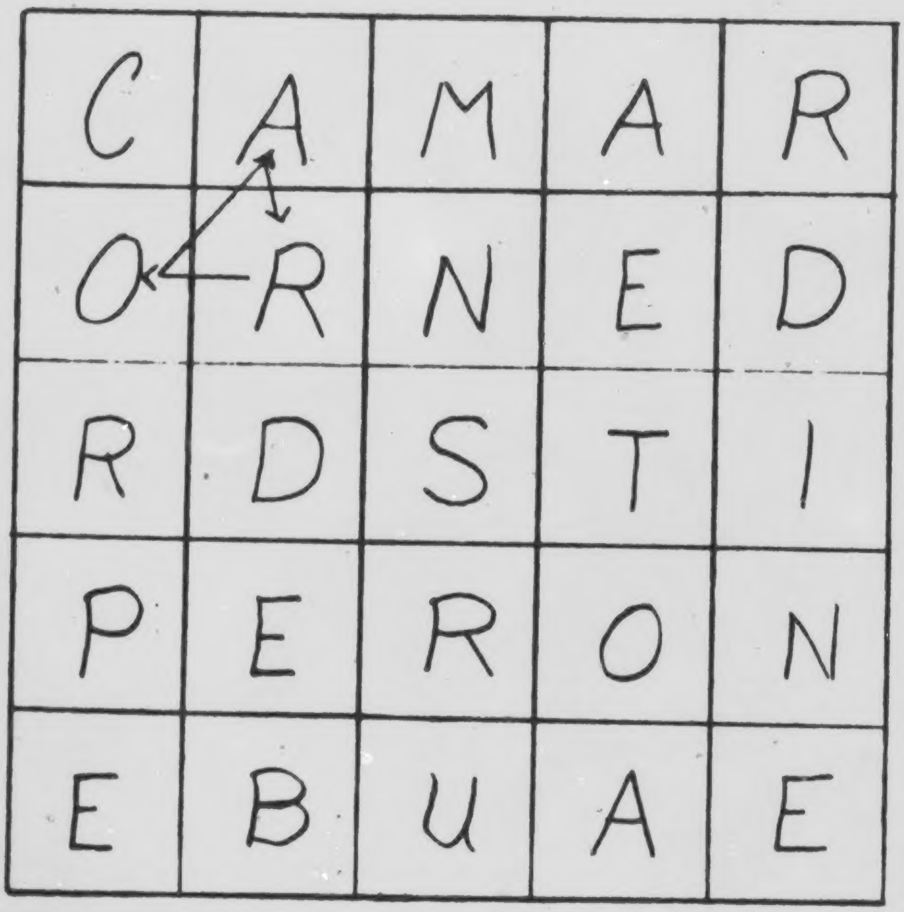
The child will be able to spell 10-25 words accurately in a time span of 15 minutes.

The child may practice making words from macaroni as an independent activity.

**Enrichment**

The game may be played again. This time place words in a crossword puzzle form.
1.6.A
1.6.B

Find all possible words within the squares of this puzzle. You may move up, down, sideways or diagonally. The same letter square may be used twice in the same word if another letter is used in between. In the example below, the letter "R" is used in the word "roar", but "O" and "A" are used between.



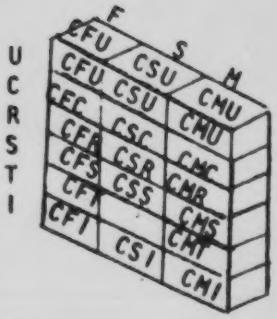
| | | | | |
|---|---|---|---|---|
| C | A | M | A | R |
| O | R | N | E | D |
| R | D | S | T | I |
| P | E | R | O | N |
| E | B | U | A | E |

From **Anchor**, Published by Educational Service, Inc., Stevensville, Michigan

# SPELLING BEE

Start with any letter in the square below, move one square at a time in any direction until you have spelled out a common English word of four or more letters. For example, you can start with H in the top row and easily spell HURL. Do not use proper names; and do not form plurals by adding "s" to three-letter words. Par on this one is 20 words in 25 minutes. The list given in the answers contains 29 words. Perhaps you can get more.

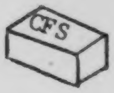
| | | | | |
|---|---|---|---|---|
| C | A | Q | H | S |
| B | N | R | U | K |
| S | G | V | L | O |
| W | T | M | I | P |
| Z | Y | E | D | J |



**Concept** Cognition

**Curricular Objective**

1.7 The child will be able to create his own puzzles from geometric shapes.



**Input**

The teacher reviews with the class the meaning of perception. Discussion with the class on the meaning of the terms "congruent", "rotating", "reflecting" and sliding.

**Learning Opportunities**

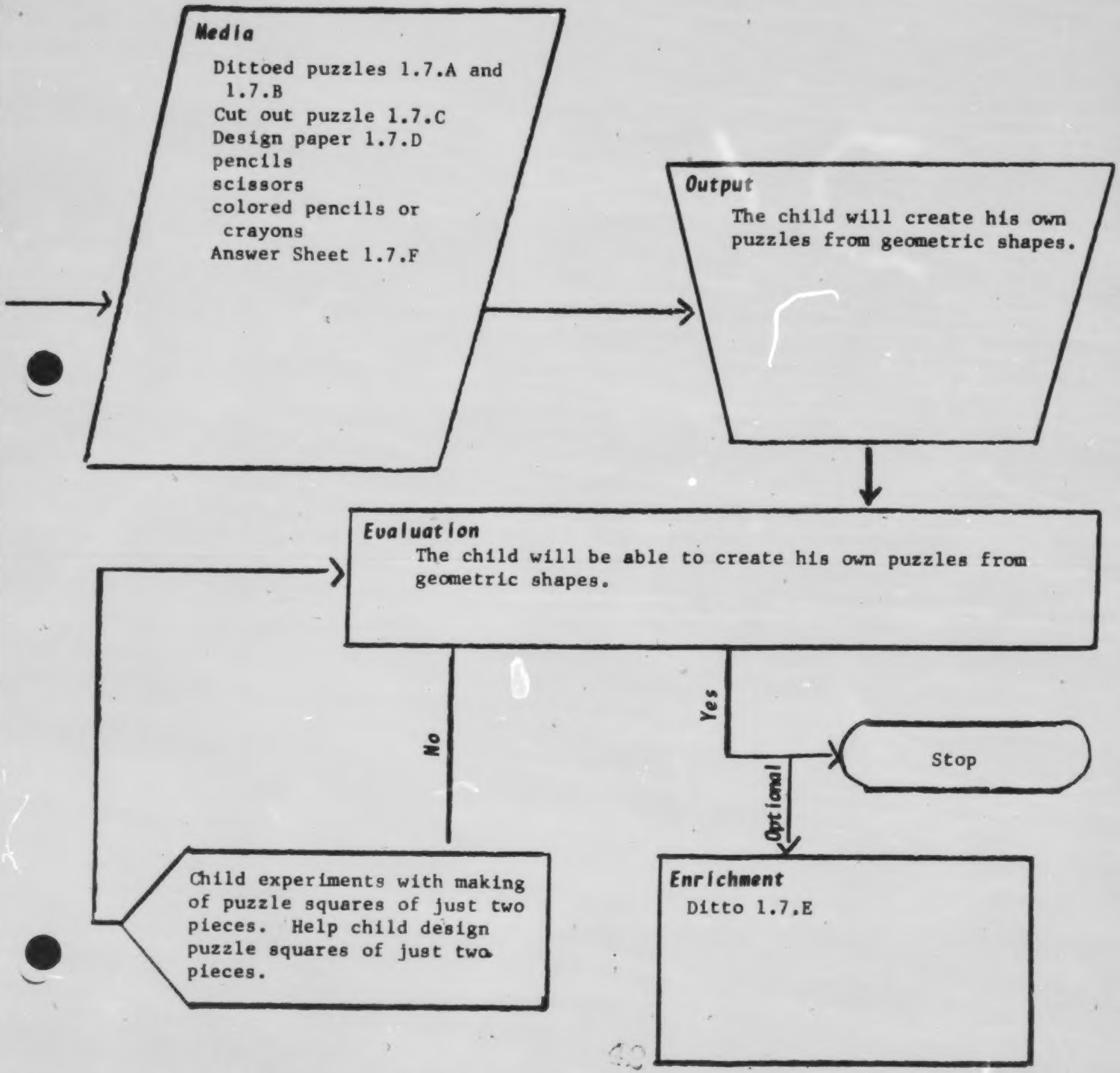
I: Using paper cutouts of circles, squares, rectangles and triangles, review "sliding", "congruence", "reflecting" and "rotating".
  A: Emphasize some shapes produce their mirror image by sliding or rotating 180°, others by "flipping".
  B: Children might be given cutout shapes to manipulate at their desks to give them a better understanding of "sliding", "rotating", and "mirror" image.

II: Teacher distributes copies of 1.7.A.
  A: Children work puzzles, discuss and correct.

III: Teacher distributes copies of 1.7.B.
  A: Children work puzzle, discuss and correct.

IV: Teacher distributes copies of 1.7.C
  A: Children cut puzzles out and put together into squares.

V: Teacher distributes copies of 1.7.D.
  A: Children are asked to design their own puzzles, using only the lines in the squares and color each section a different color.



**Media**

Dittoed puzzles 1.7.A and 1.7.B
Cut out puzzle 1.7.C
Design paper 1.7.D
pencils
scissors
colored pencils or crayons
Answer Sheet 1.7.F

**Output**

The child will create his own puzzles from geometric shapes.

**Evaluation**

The child will be able to create his own puzzles from geometric shapes.

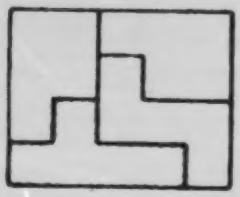
Child experiments with making of puzzle squares of just two pieces. Help child design puzzle squares of just two pieces.

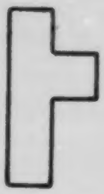
**Enrichment**

Ditto 1.7.E

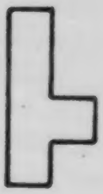
WHICH PUZZLE PIECE CAN BE MOVED OVER THE DARK PUZZLE PIECE BY SLIDING OR TURNING IT ONLY? (THE PIECE CANNOT BE FLIPPED OVER).

1





A



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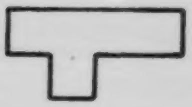
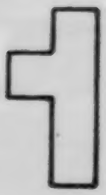
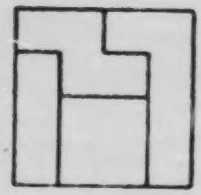


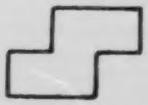
C



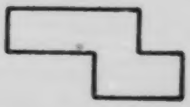
D

2





A



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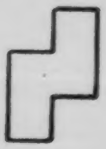

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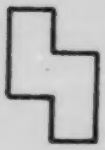

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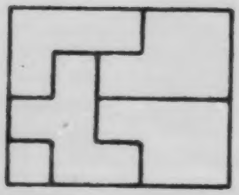

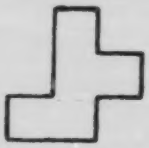

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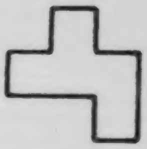

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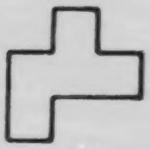

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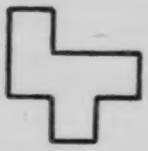

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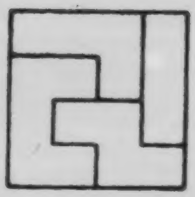

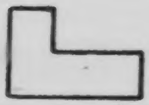

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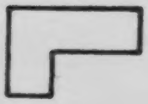

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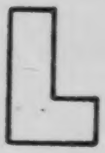

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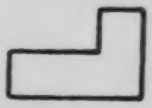

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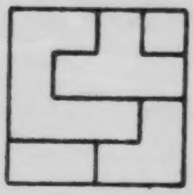
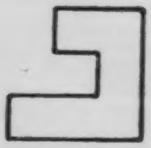
5





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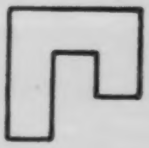

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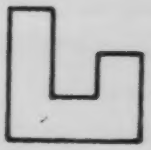

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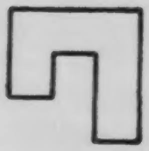
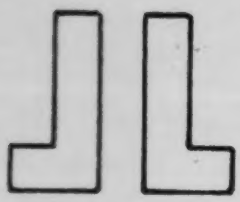
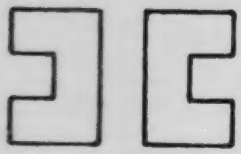
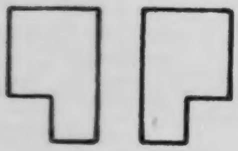


D

IF YOU FLIP OR *REFLECT* A SHAPE, THIS GIVES A *MIRROR IMAGE* OF THE SHAPE. THREE SAMPLES OF SHAPES AND THEIR MIRROR IMAGES ARE SHOWN BELOW. CAN YOU DRAW IN THE OTHER NINE?







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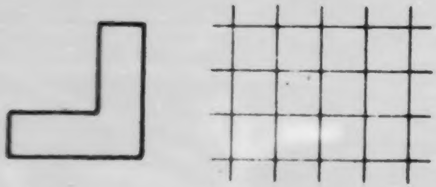

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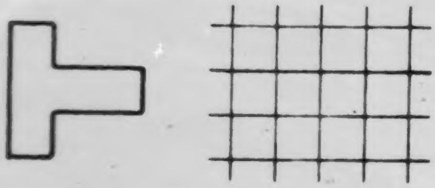

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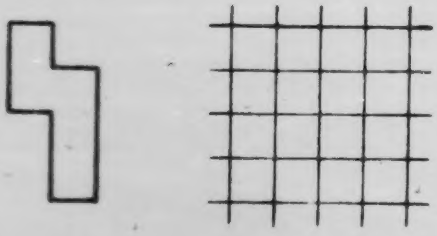

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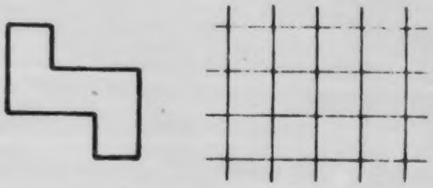

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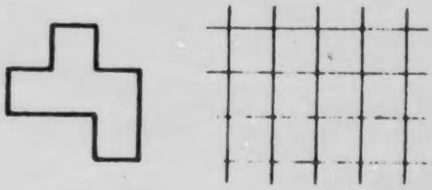

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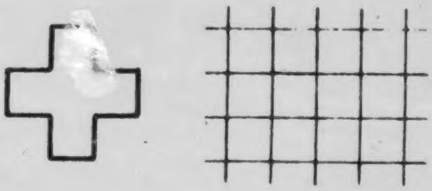

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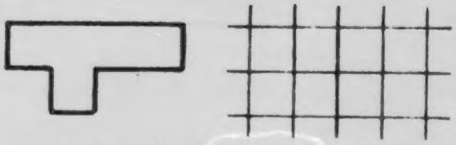

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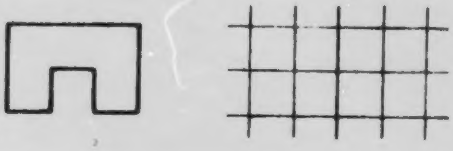

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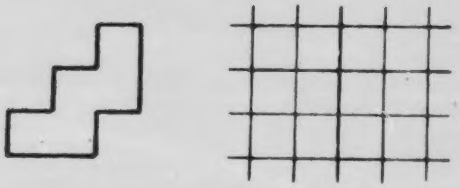
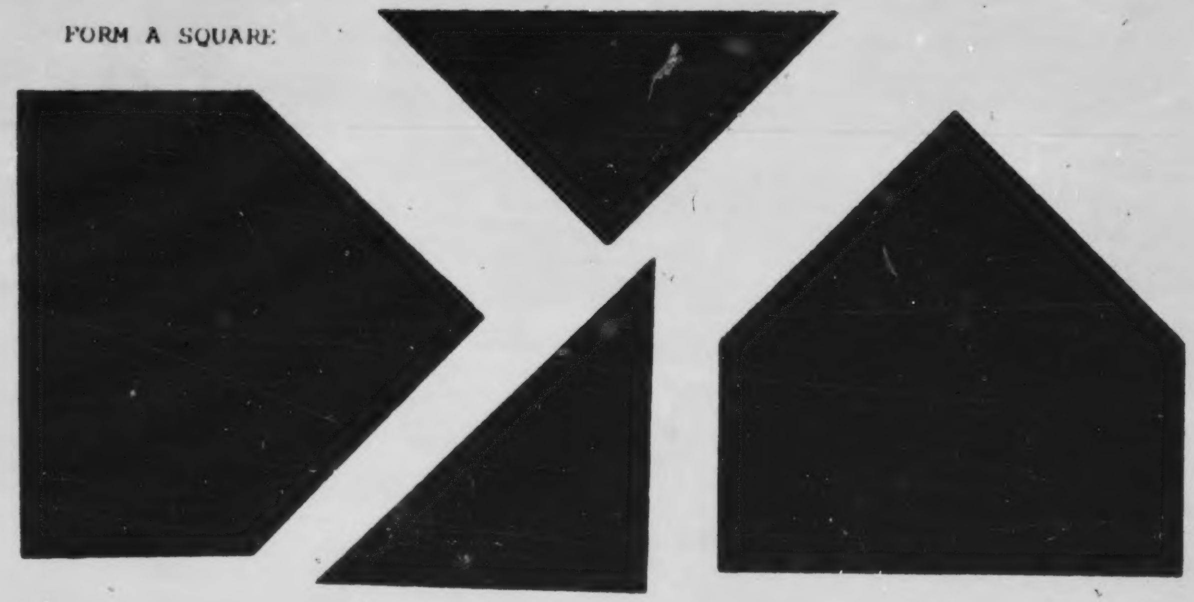
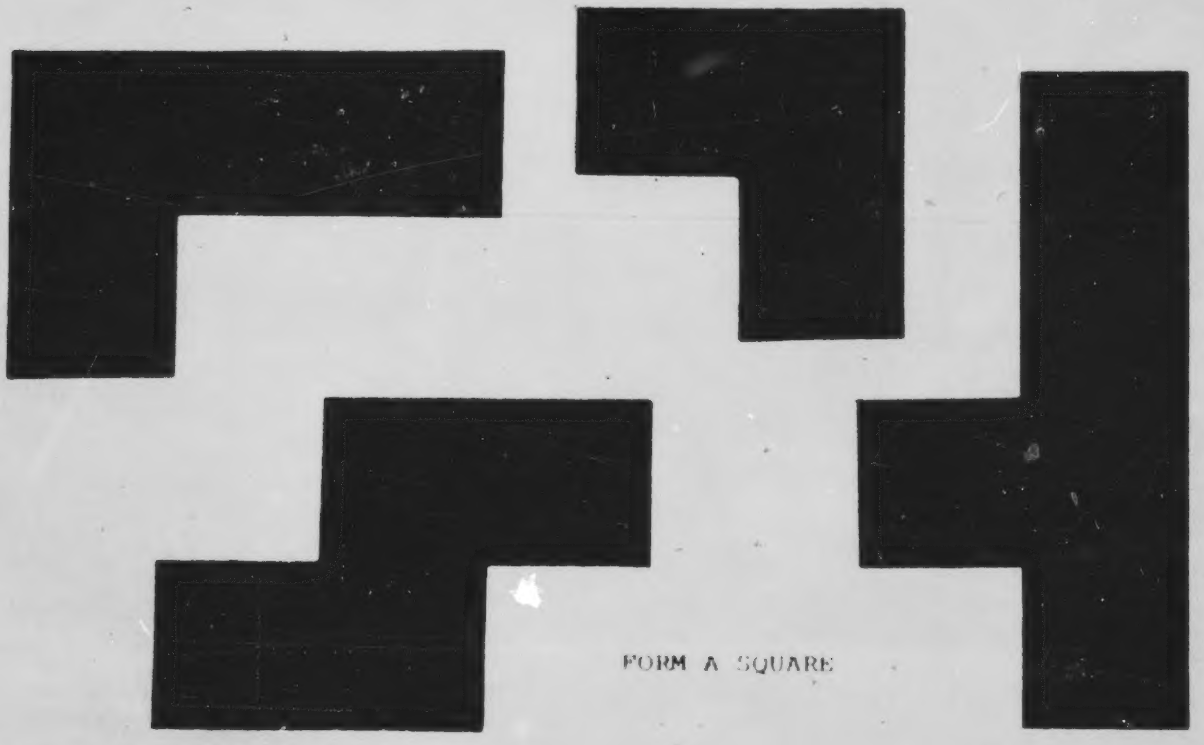
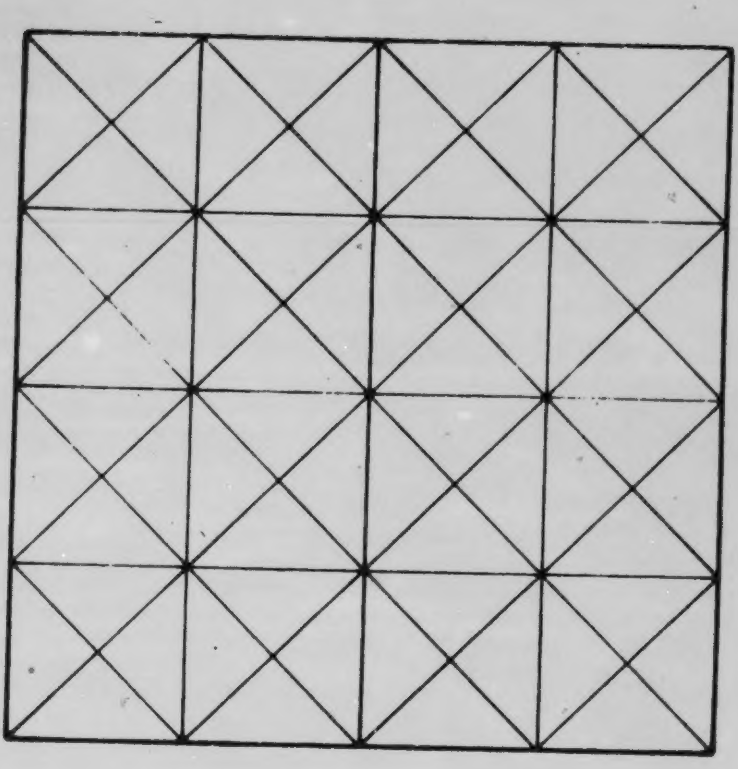


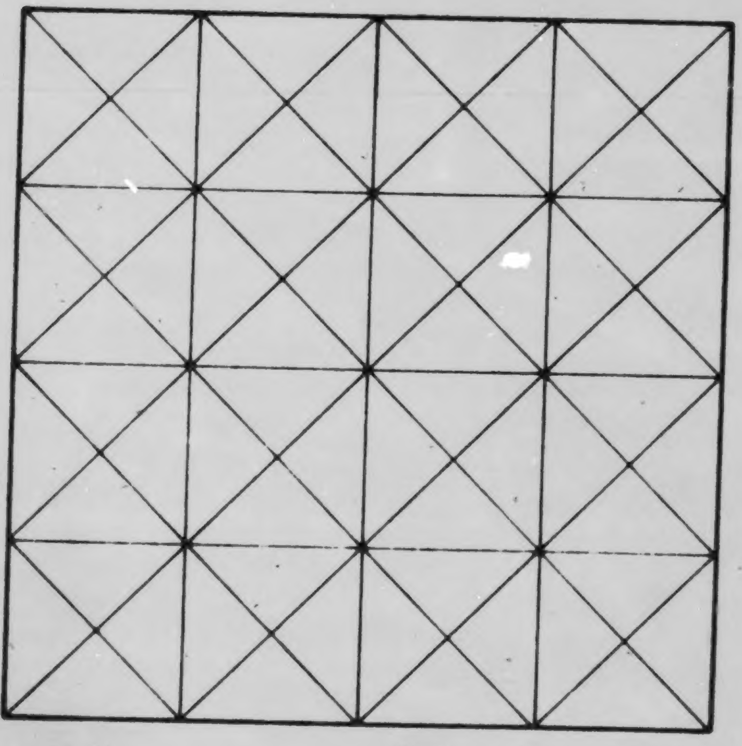
FORM A SQUARE





FORM A SQUARE





CIRCLE THE LETTERS BENEATH THE TWO PUZZLE PIECES THAT WOULD COMPLETE THE RECTANGLE. THE PIECE MAY BE TURNED BUT NOT FLIPPED.

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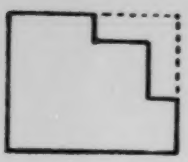

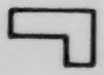

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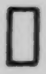

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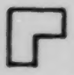

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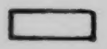

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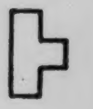

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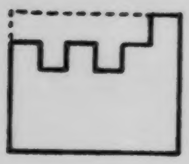

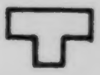

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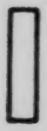

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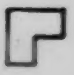

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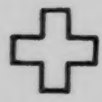

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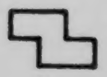

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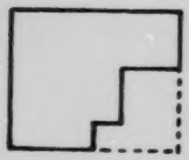

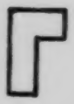

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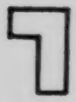

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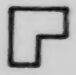

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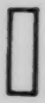

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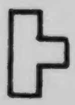

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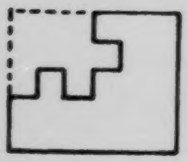

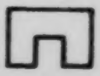

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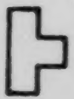

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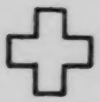

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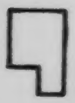

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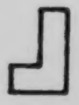

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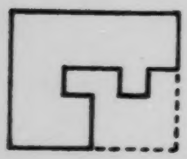

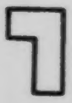

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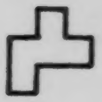

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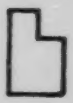

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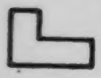

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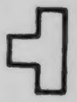

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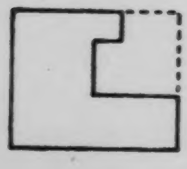

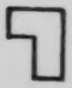

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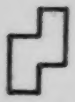

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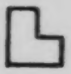

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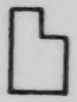

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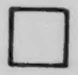

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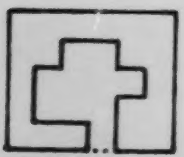

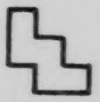

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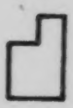

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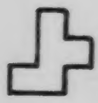

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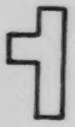

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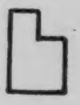


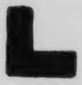
E

## ANSWER SHEET

### 1.7.A

Row 1 - A
2 - C
3 - B
4 - A
5 - B

### 1.7.B

1

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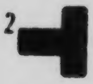
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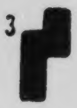
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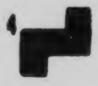
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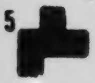
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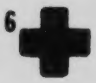
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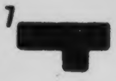
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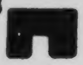
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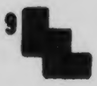
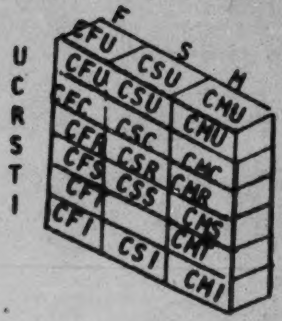


### 1.7.E

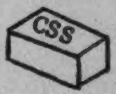
Row 1 = B & D
" 2 = A & C
" 3 = C & E or B & C
" 4 = C & E
" 5 = B & D
" 6 = A & E
" 7 = A & C



**Concept** Cognition

**Curricular Objective**

1.8 The child will be able to discover similarities and differences among attribute cards.



**Input**

Discuss the term perception as it is related to the five senses. Discuss becoming aware of the world around us by using the five senses.

**Learning Opportunities**

I: The teacher gives each child a piece of paper and asks them to list all those things seen on the way to school.

A: Compare lists for likeness and differences. (Teacher has package of 48 attribute cards (See 1.8.A). The meaning of attributes is discussed.

B: She decides ahead of time on a certain attribute or combination of attributes, eg: all wide lines; thin lines and broken etc.

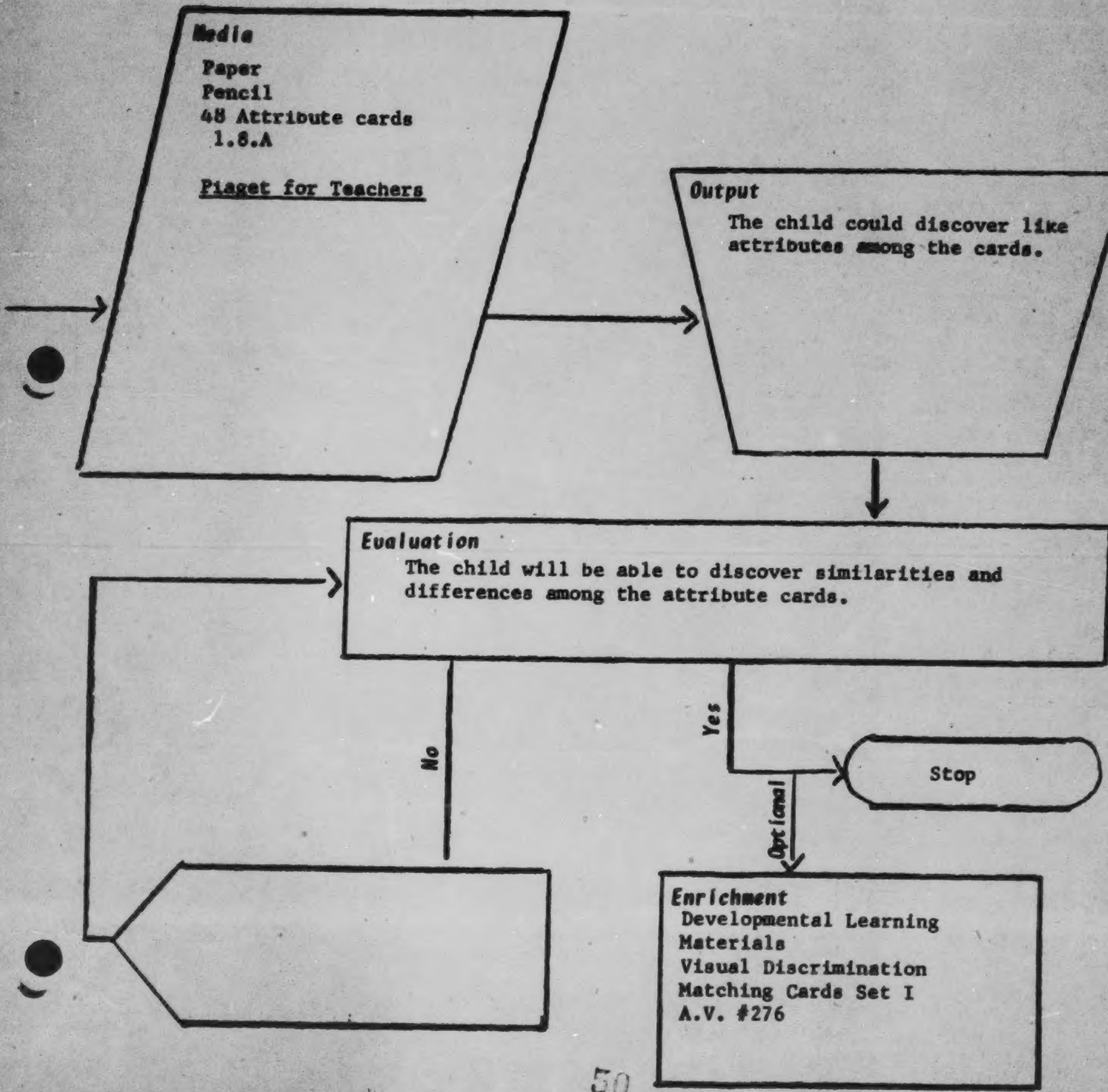
C: Teacher holds up one card at a time.

D: She will reject or accept some of these cards as she holds them up to the children.

E: Children must look to see what attributes the teacher has decided on with those cards she accepts.

II: Answer sheet for each attribute card 1.8.B

Attributes for attribute cards:
wide and thin line
broken and continuous
curved and straight, irregular
double and single lines
horizontal and vertical



**Media**

Paper
Pencil
48 Attribute cards
1.8.A

Piaget for Teachers

**Output**

The child could discover like attributes among the cards.

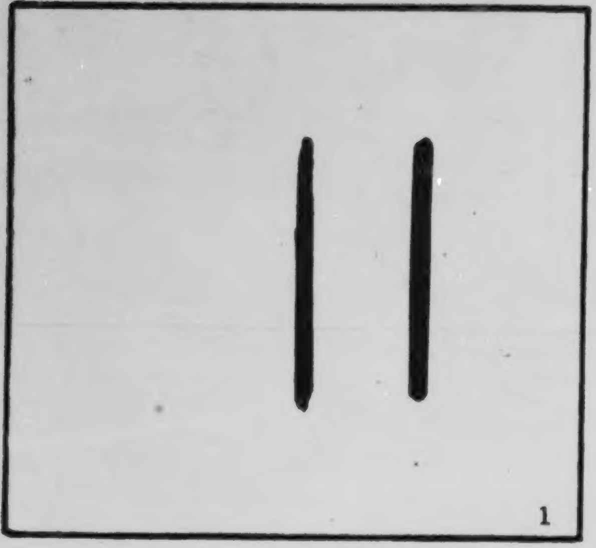
**Evaluation**

The child will be able to discover similarities and differences among the attribute cards.

**Enrichment**

Developmental Learning Materials
Visual Discrimination Matching Cards Set I
A.V. #276

1.8.A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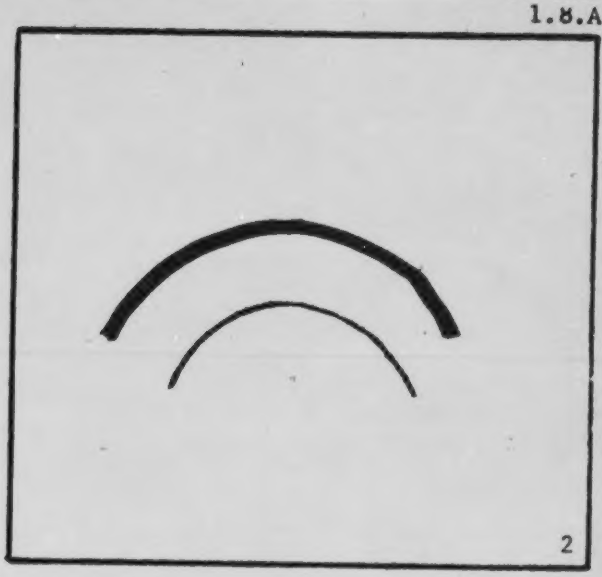
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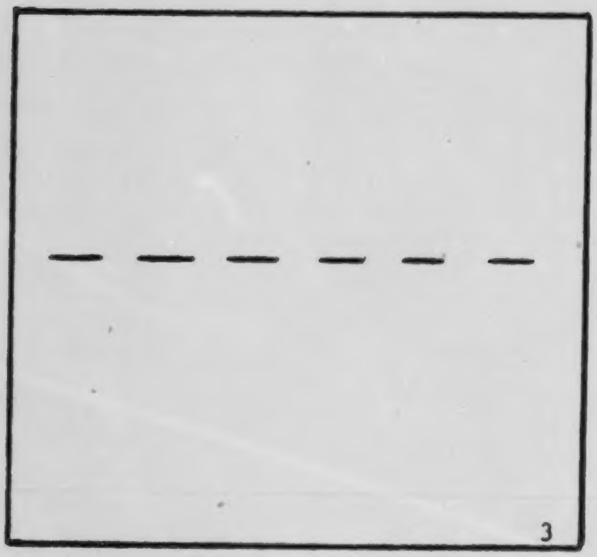
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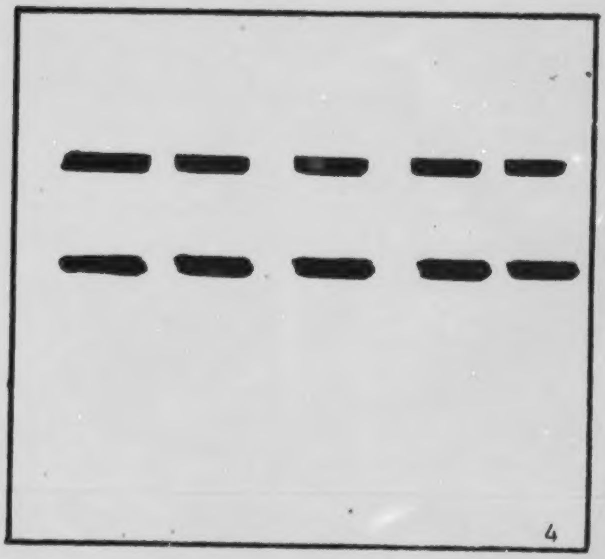
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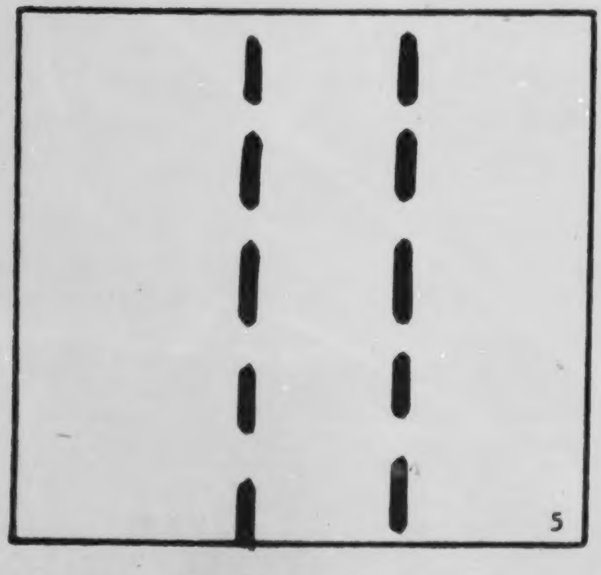
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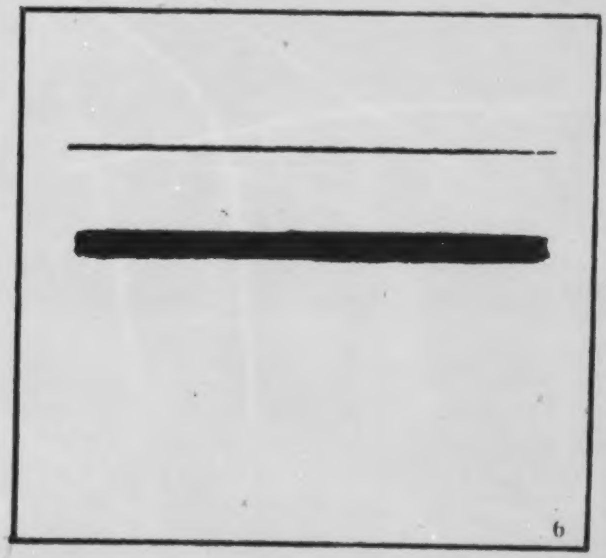
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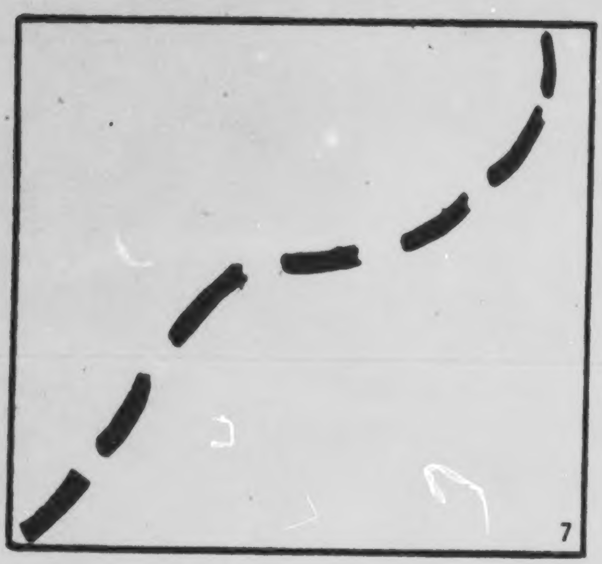
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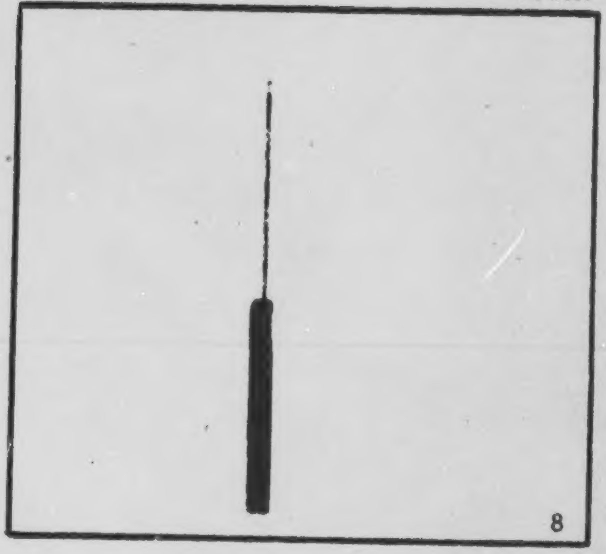
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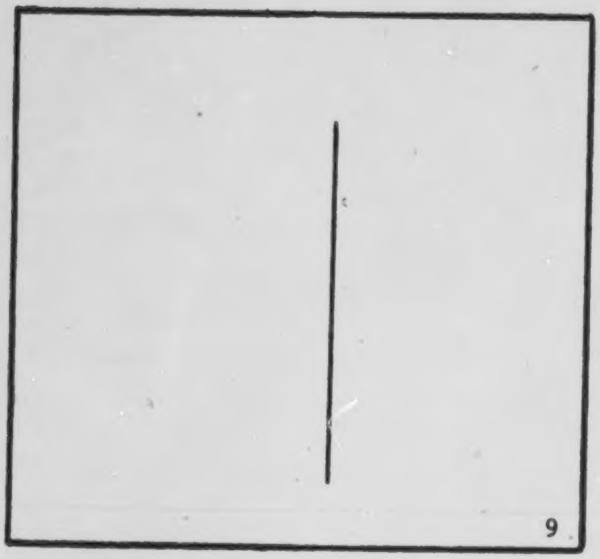
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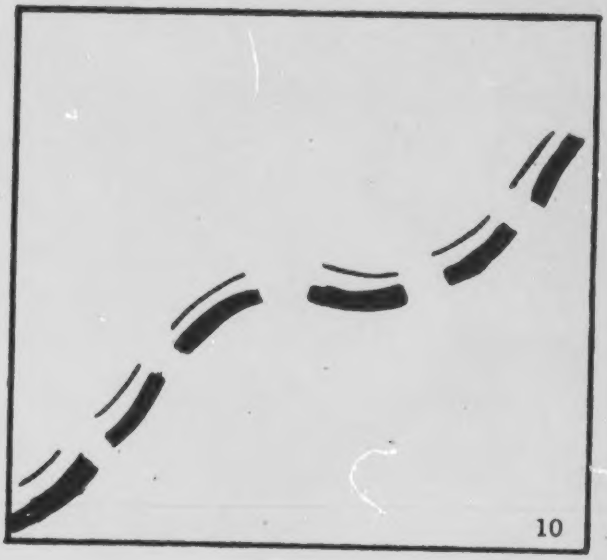
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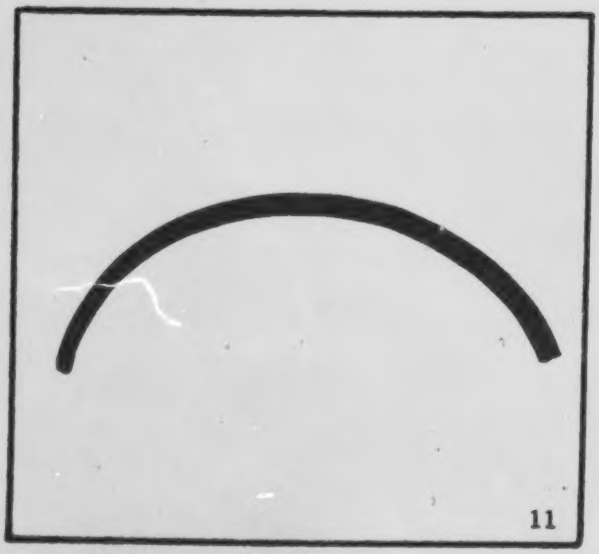
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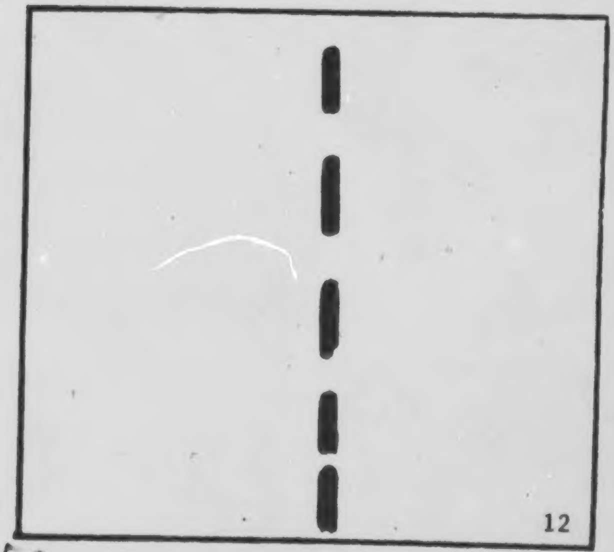
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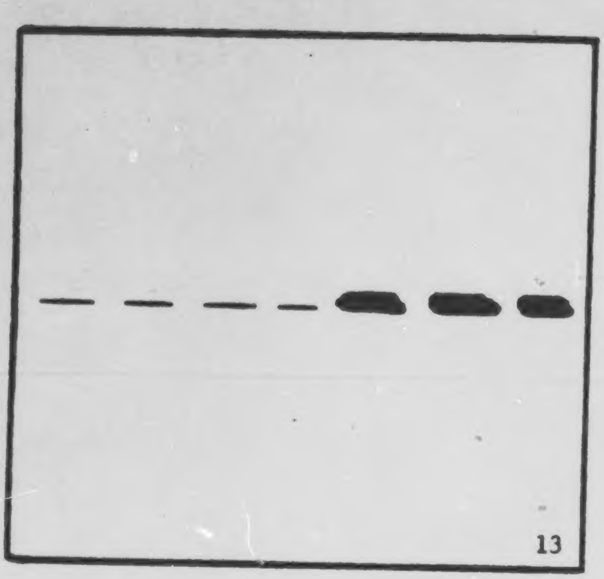
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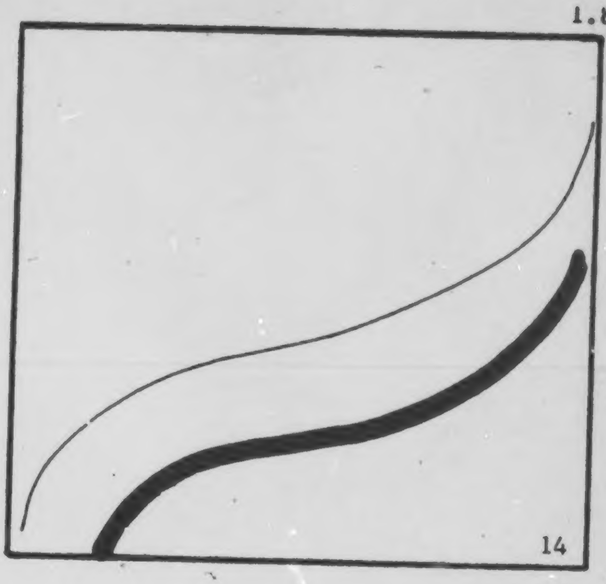
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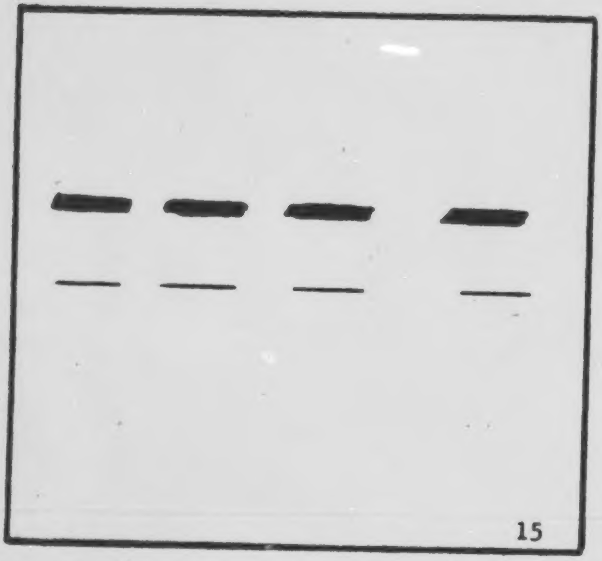
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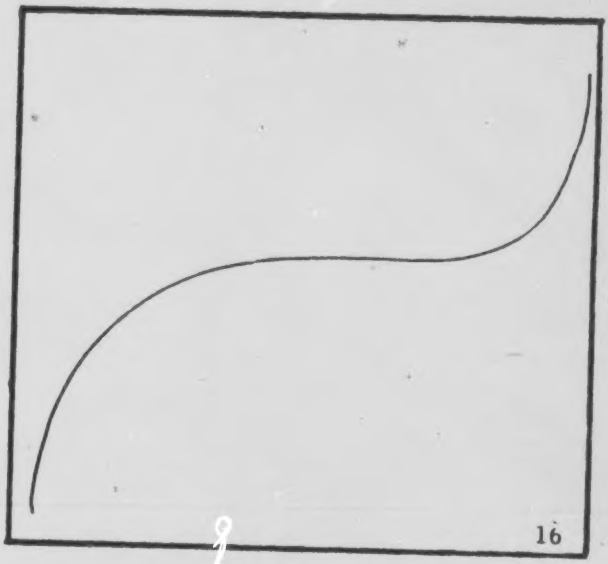
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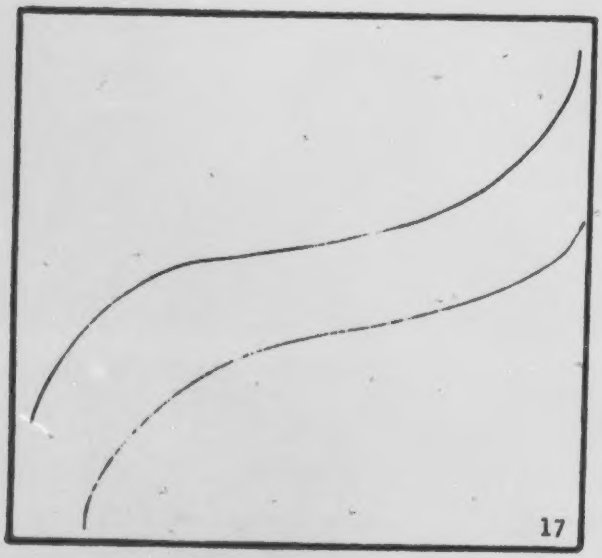
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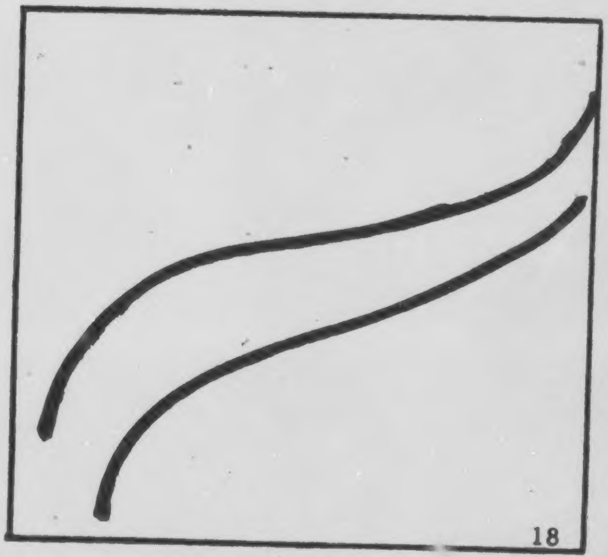
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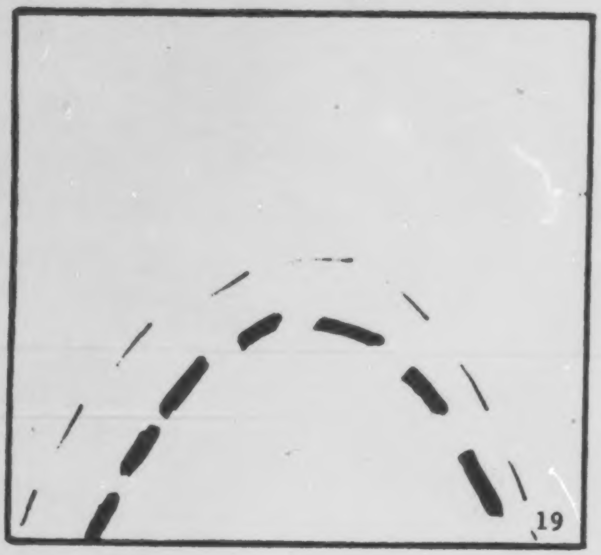
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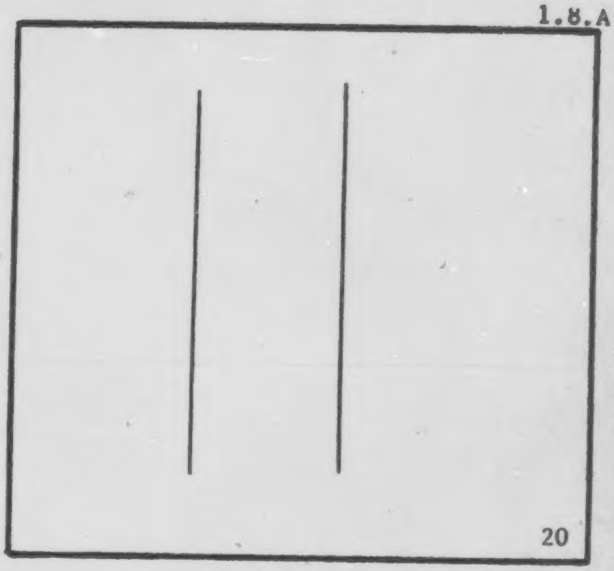
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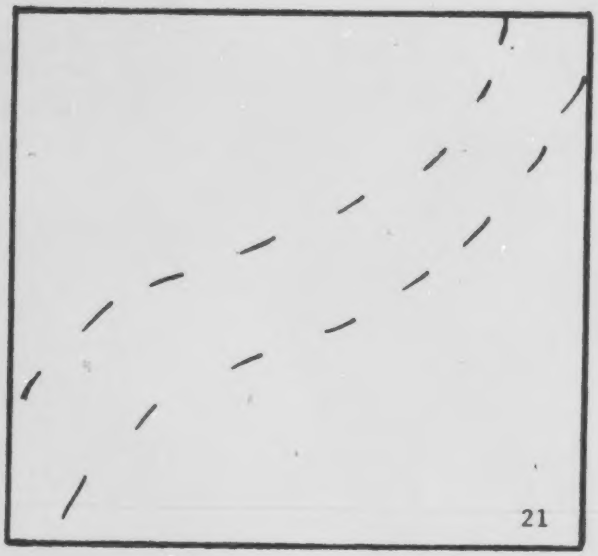
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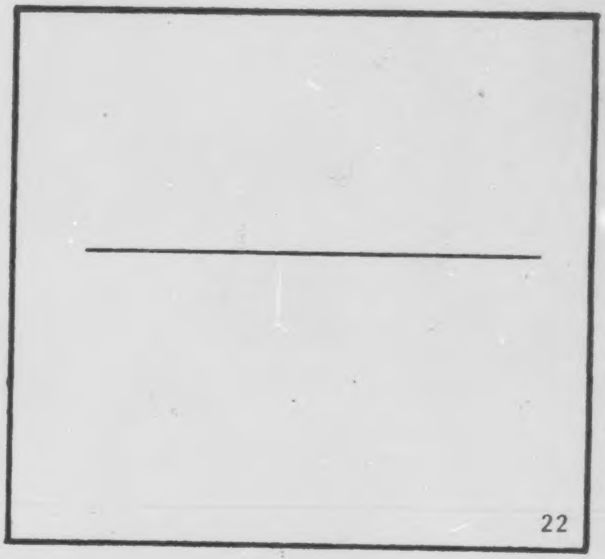
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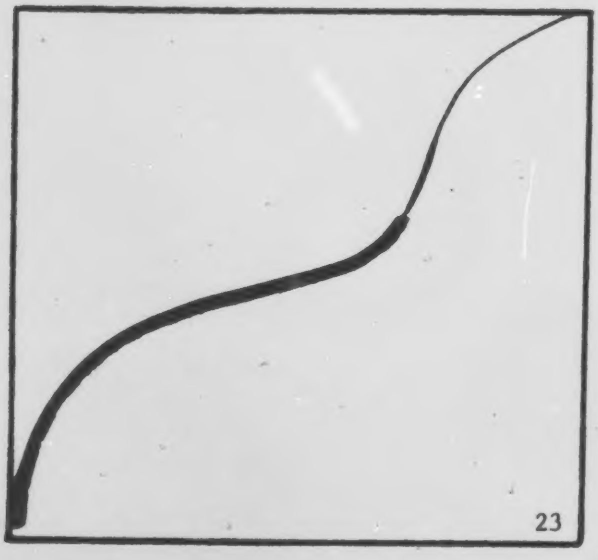
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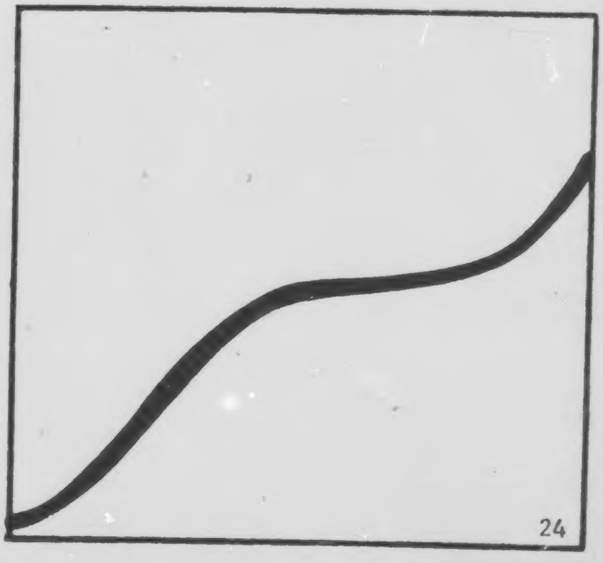
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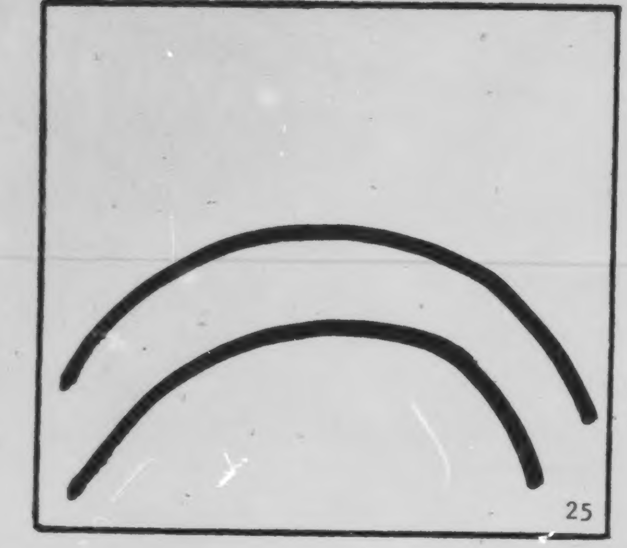

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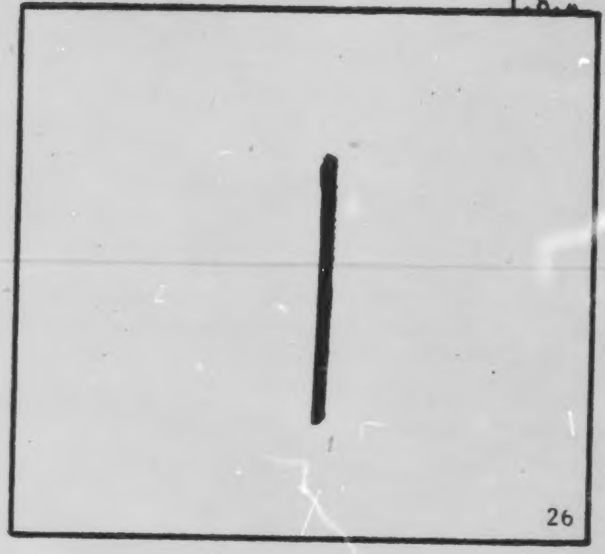

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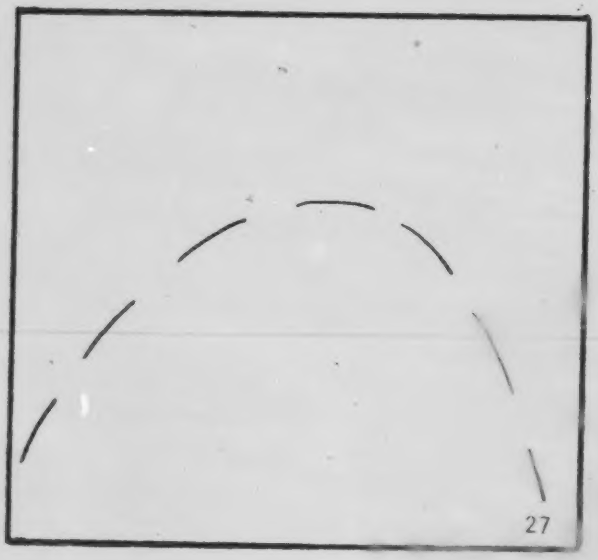

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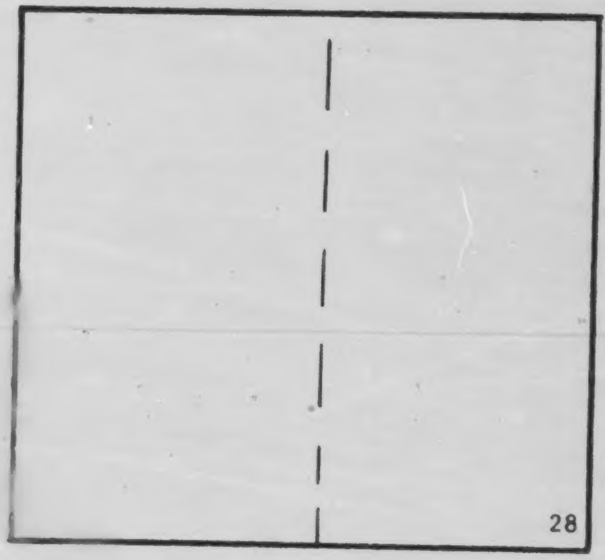

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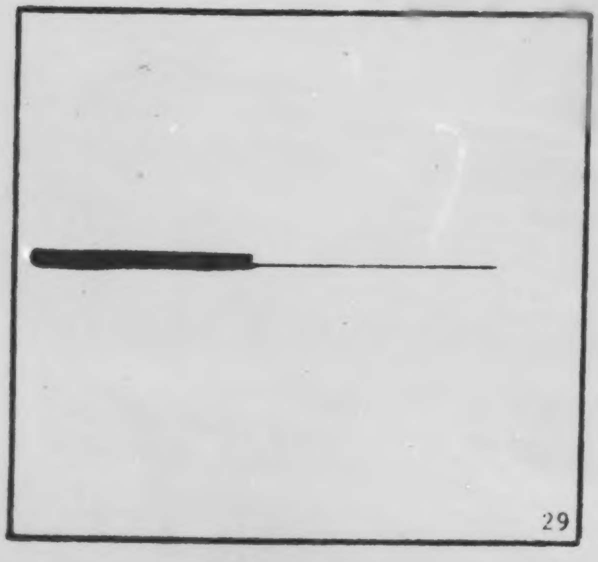

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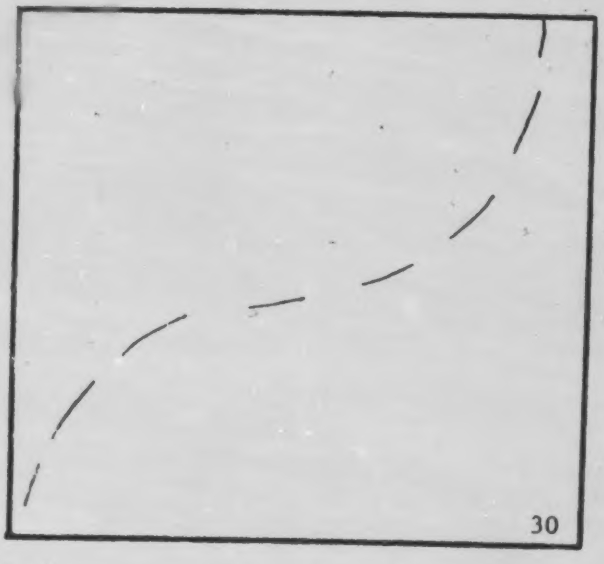

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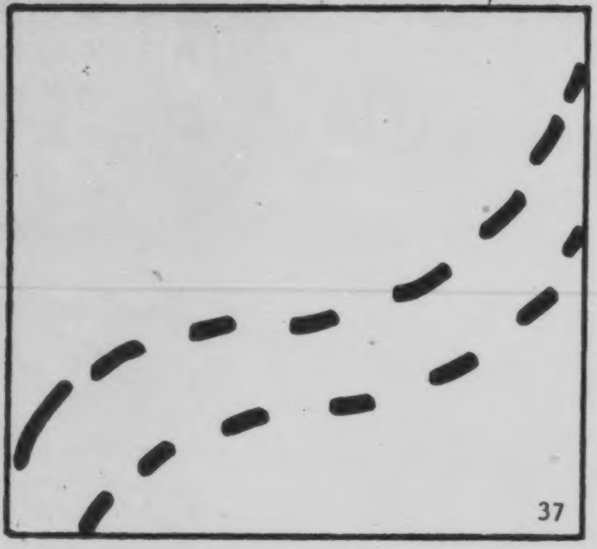

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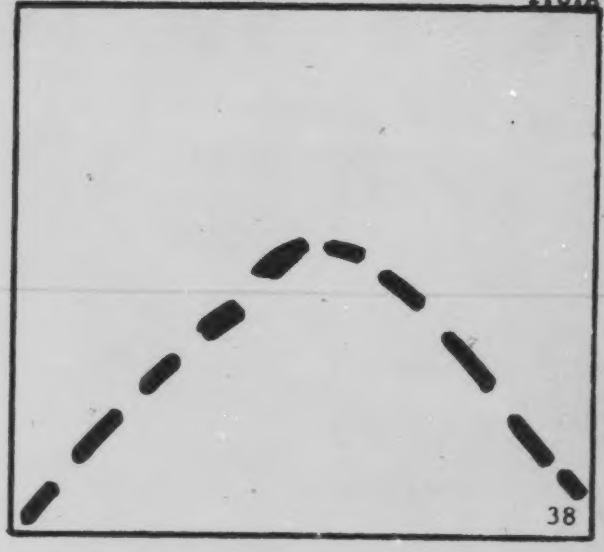

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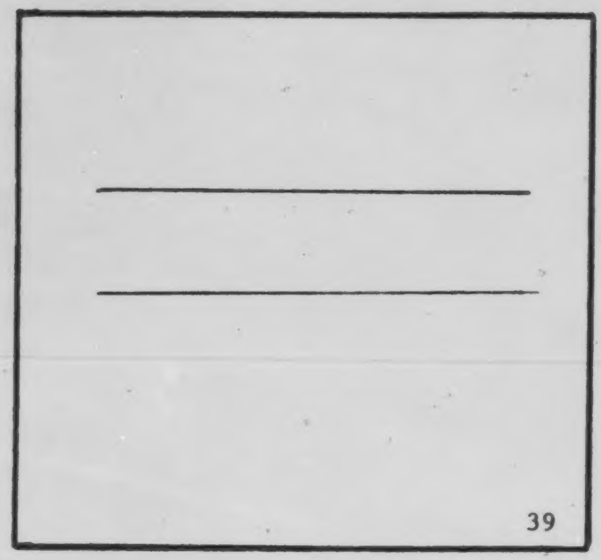

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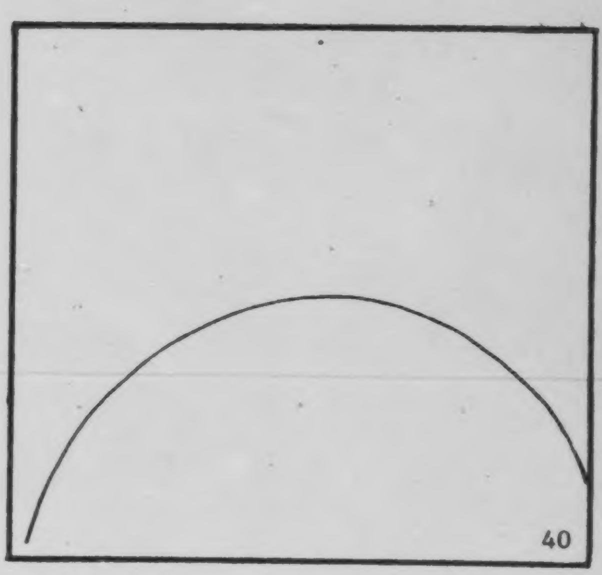

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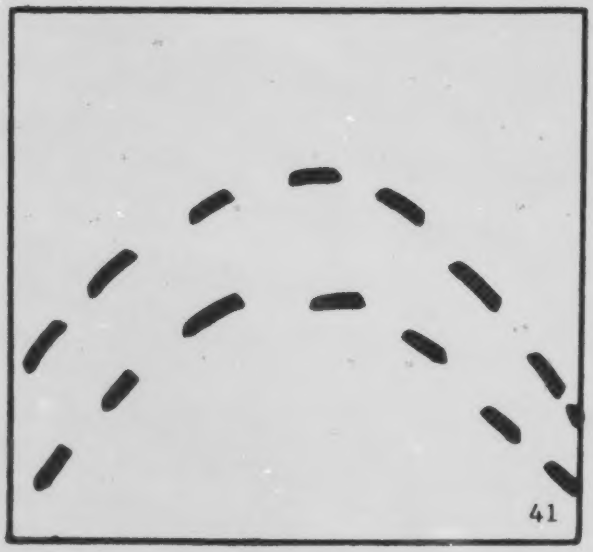

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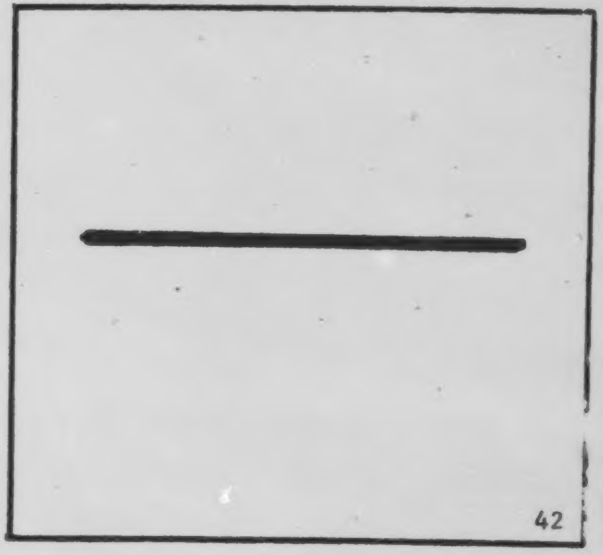

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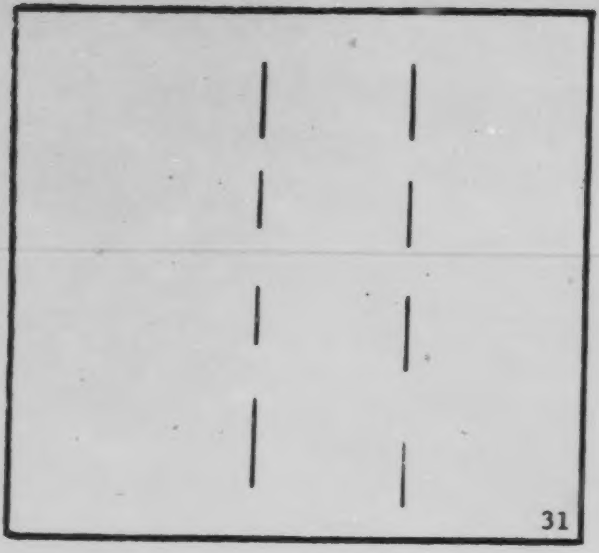
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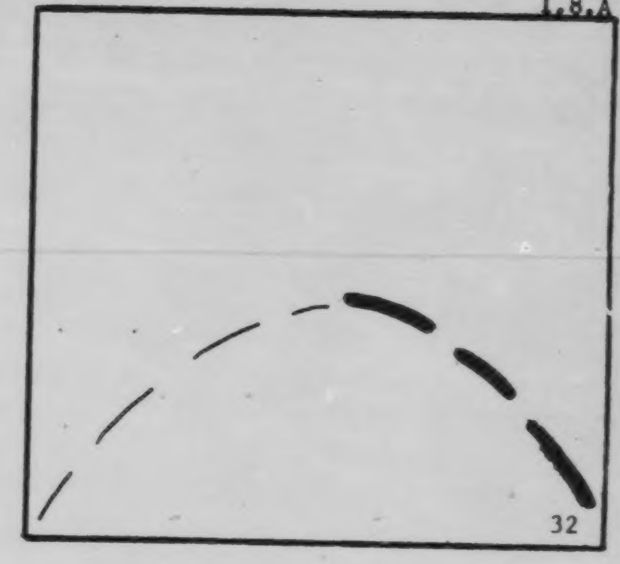
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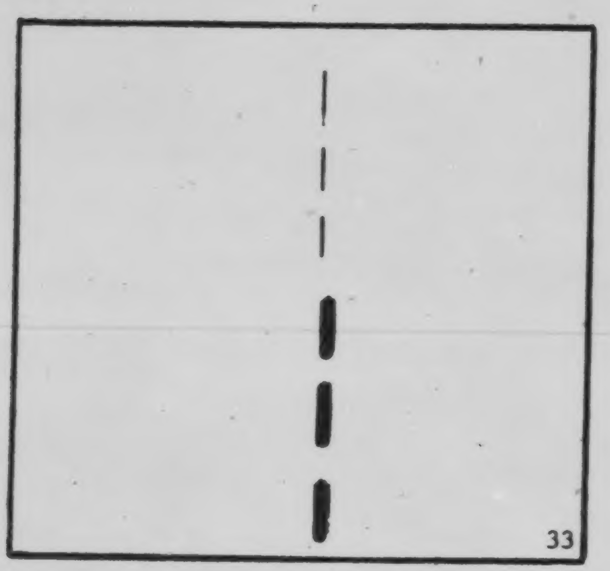
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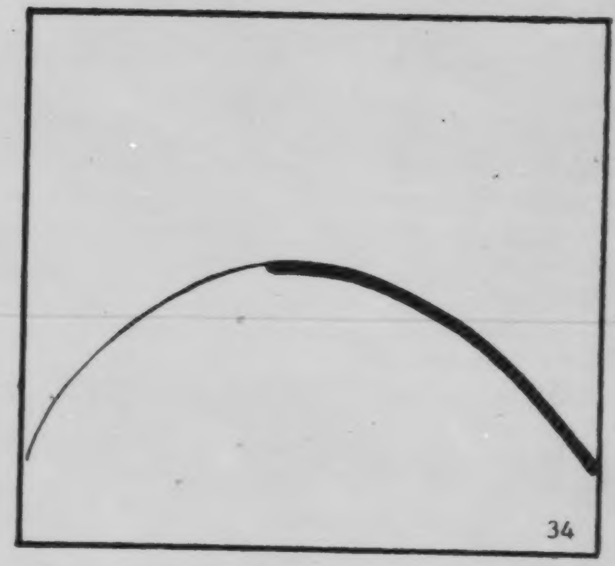
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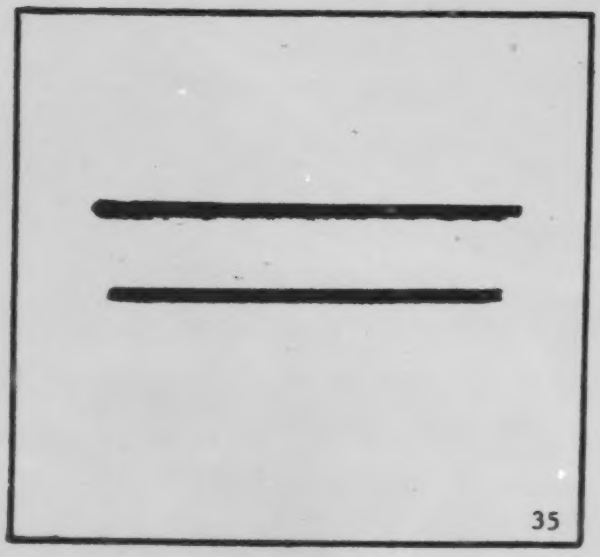
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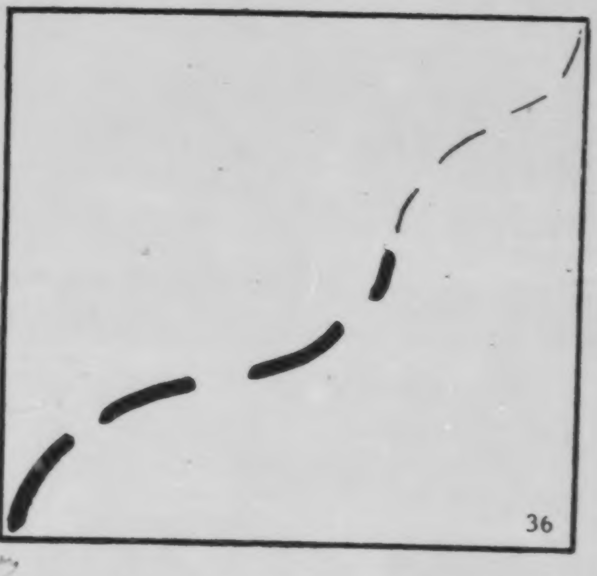
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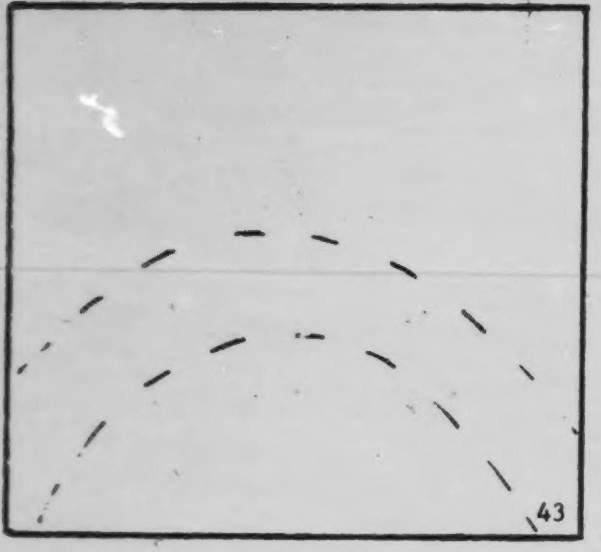
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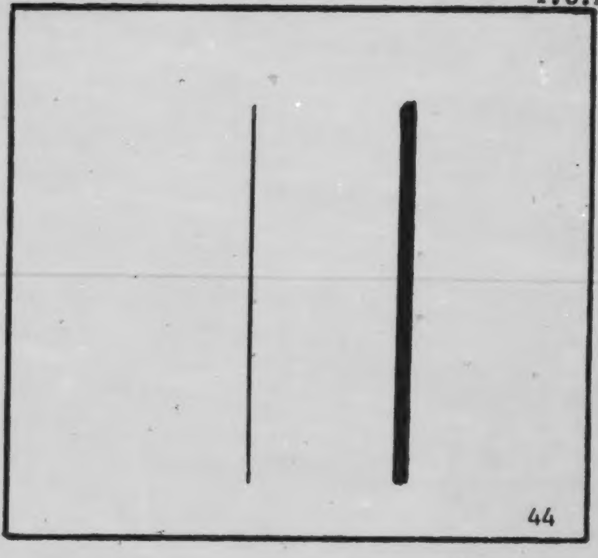
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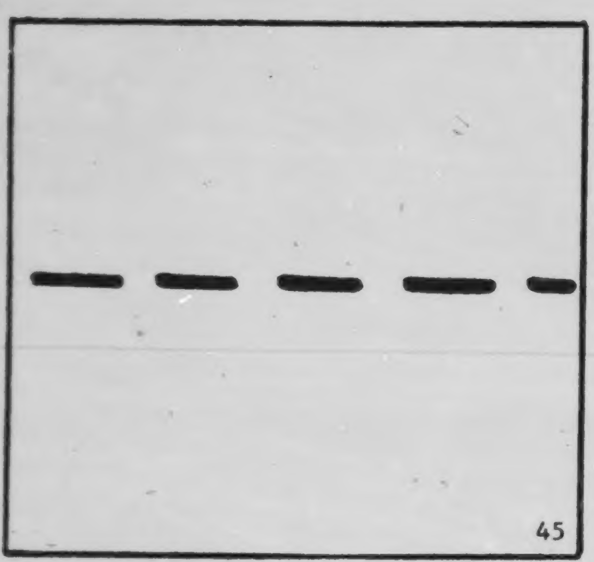
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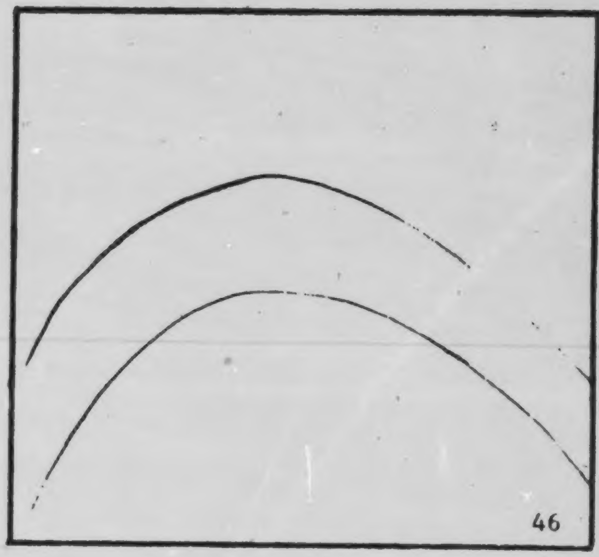
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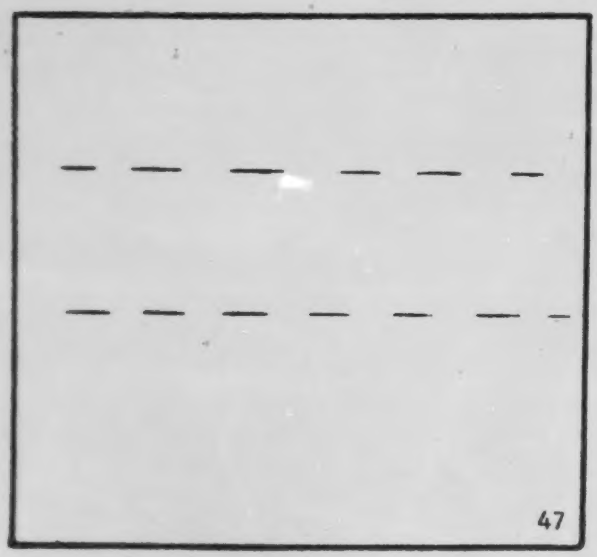
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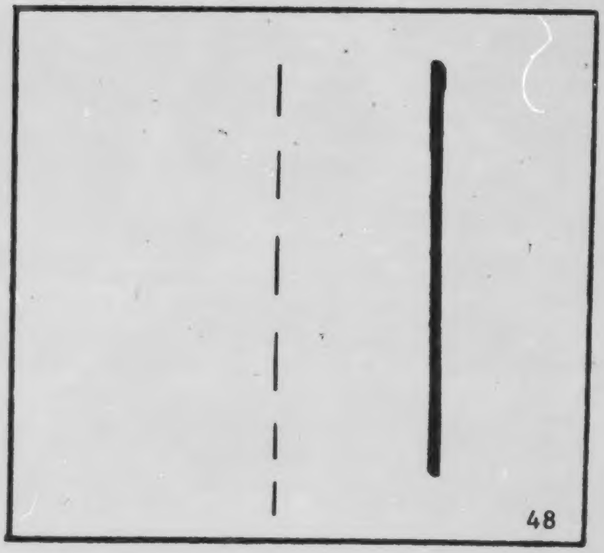
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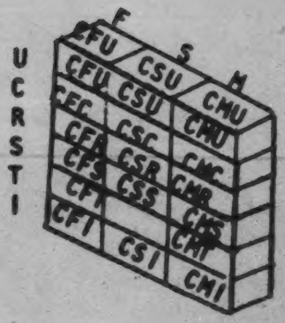
## Answer Key

1. Wide, double, vertical
2. Wide, thin, curved, double
3. Broken, straight, thin, single horizontal
4. Broken, straight, double, wide, horizontal
5. Double, wide, vertical, broken
6. Thin, wide, double, horizontal continuous
7. Wide, broken, irregular, single
8. Single, thin, wide, vertical continuous
9. Thin, vertical, continuous, single
10. Irregular, thin, wide, double broken
11. Curved, wide, single
12. Vertical, single broken, wide, straight
13. Thin, wide, horizontal, broken, single straight
14. Thin, wide, irregular, double, continuous
15. Double, wide, thin, horizontal straight, broken
16. Irregular, thin, single, continuous
17. Double, thin, irregular continuous
18. Double, wide, irregular, continuous
19. Thin, wide, double, broken, curved
20. Thin, straight, vertical, double, continuous
21. Broken, double, thin, irregular
22. Thin, horizontal, straight, single, continuous
23. Wide, thin, single, irregular, continuous
24. Wide, single, irregular, continuous
25. Curved, double, wide, continuous
26. Wide, single, vertical, straight, continuous
27. Curved, thin, single, broken
28. Thin, broken, vertical, straight, single
29. Wide, thin, continuous, straight, single, horizontal
30. Broken, irregular, thin, single
31. Vertical, double, thin, broken, straigh
32. Broken, curved, single, wide, thin
33. Straight, vertical, wide, thin, broken, single
34. Curved, single, wide, thin, continuous
35. Double, continuous, wide straight, horizontal
36. Broken, irregular, single, wide, thin
37. Broken, wide, irregular, double
38. Broken, wide, curved, single
39. Double, thin, continuous, straight horizontal
40. Single, curved, thin, continuous
41. Broken, double, curved wide
42. Wide, single, continuous, straight, horizontal
43. Broken, double, thin, curved
44. Wide, thin, vertical, straight, continuous, double
45. Broken, vertical, single, straight, horizontal
46. Curved, double, thin, continuous
47. Double, broken, thin, straight horizontal
48. Double, wide, thin, vertical, straight, broken



**Concept** Cognition

**Curricular Objective**

1.9 The child will be able to match related pairs of pictures and distinguish similarites and differences between those that are much alike.

**Input**

Discuss perception--the importance of becoming more aware and being able to see similarities and differences.

**Learning Opportunities**

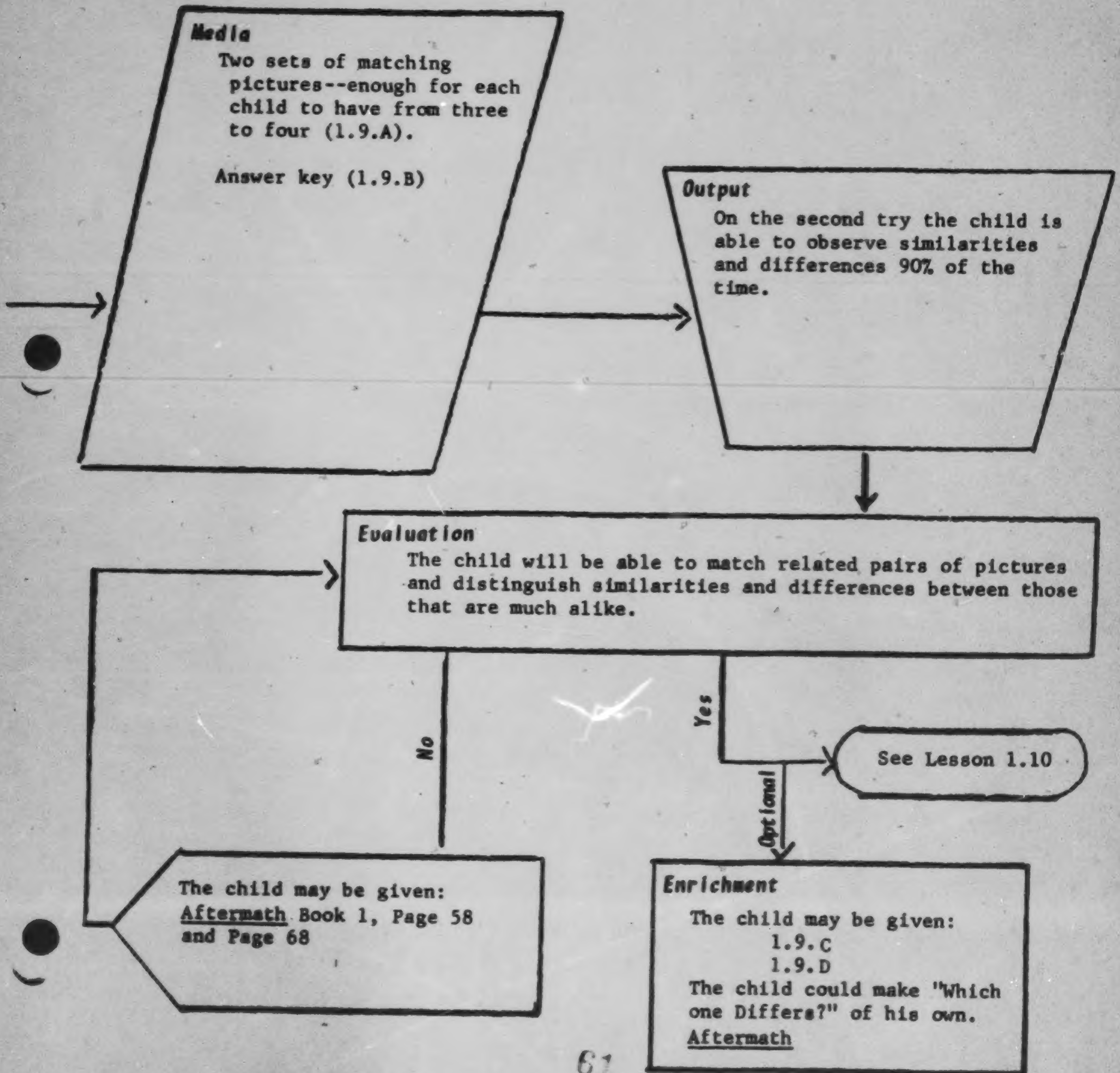
I: The teacher places one set of cards around the room. She hands out the matching pack of cards to the children (See 1.9.A).

A: Children must look for their matching pictures around the room.

B: When located, child gets answer key from teacher and sits at desk to correct (See 1.9.B). Child may not leave desk to correct his mistakes.

C: Ten points allowed for each correctly matched picture.

D: Play game again giving out new pictures to children and following the same procedure as above.



**Media**

Two sets of matching pictures--enough for each child to have from three to four (1.9.A).

Answer key (1.9.B)

**Output**

On the second try the child is able to observe similarities and differences 90% of the time.

**Evaluation**

The child will be able to match related pairs of pictures and distinguish similarities and differences between those that are much alike.

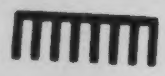
The child may be given:
Aftermath Book 1, Page 58 and Page 68

See Lesson 1.10

**Enrichment**

The child may be given:
1.9.C
1.9.D
The child could make "Which one Differs?" of his own.
Aftermath

1.9.A
Set 1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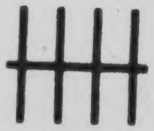
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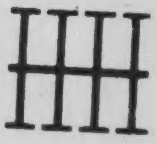
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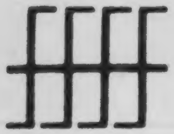
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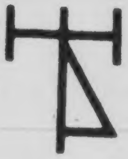
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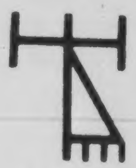
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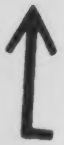
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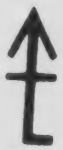
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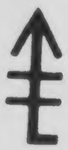
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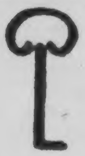

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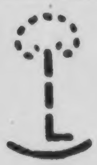

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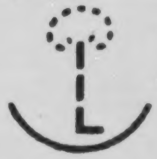

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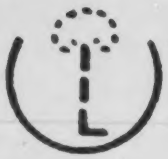

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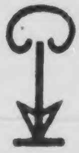

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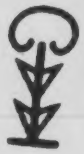

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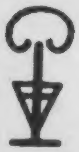

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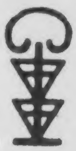

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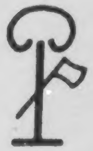

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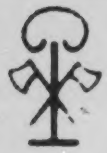
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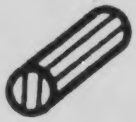
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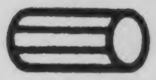
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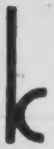
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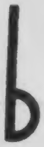
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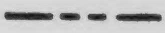
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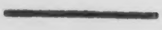
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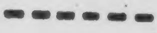
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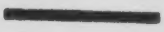
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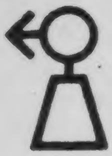

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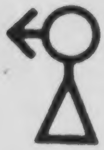

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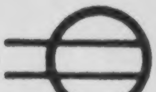

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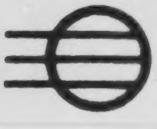

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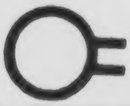

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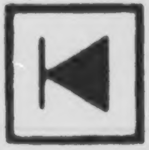

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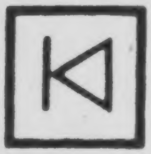

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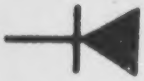

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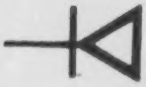

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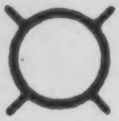

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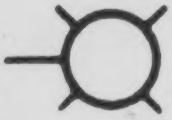

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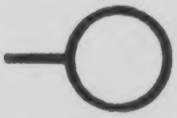

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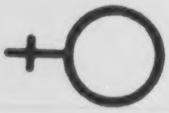

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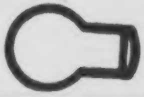

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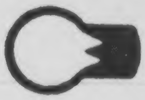

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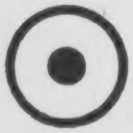

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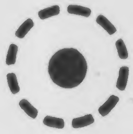

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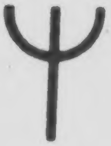

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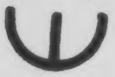

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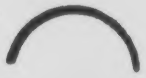

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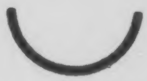

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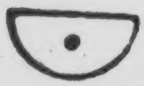

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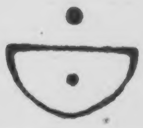

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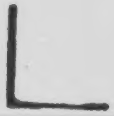

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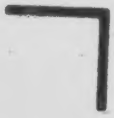

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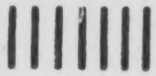

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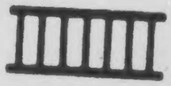

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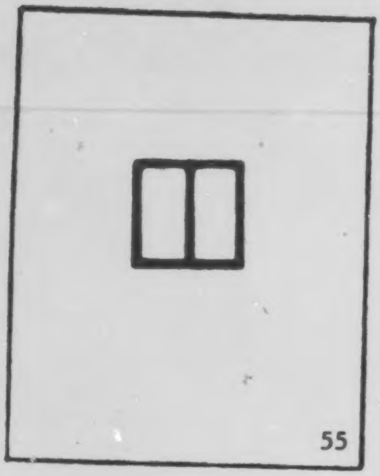

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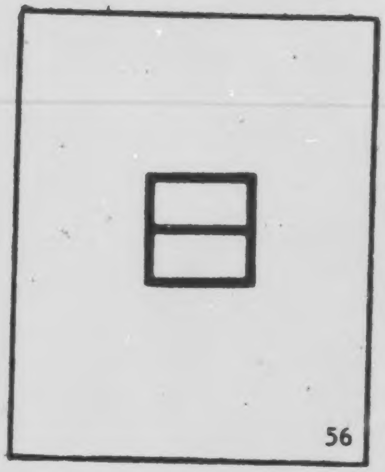

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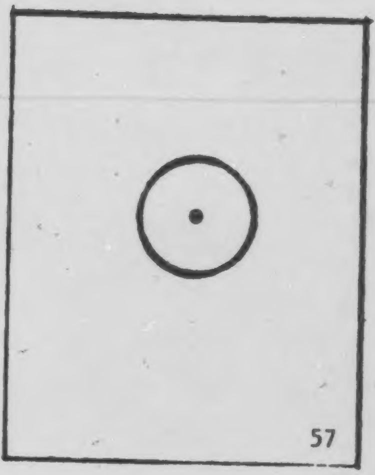

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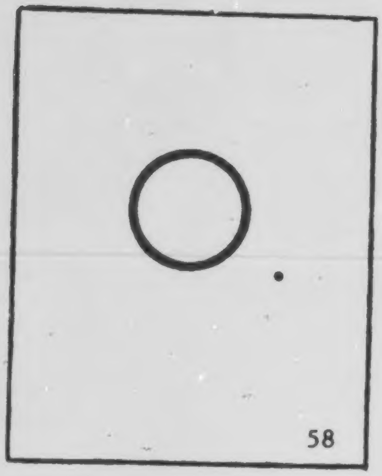

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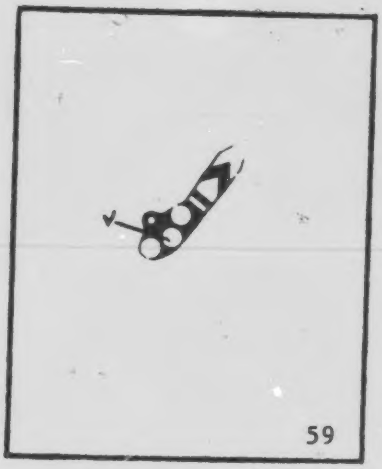

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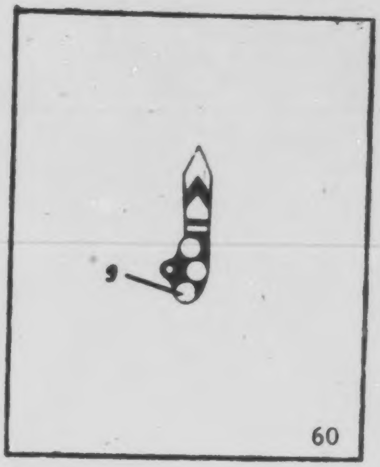

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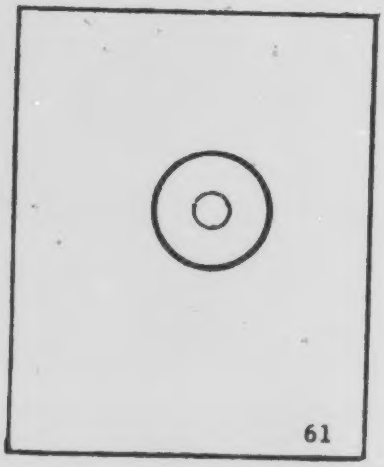

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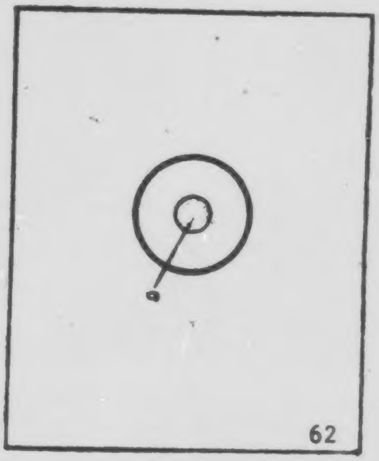

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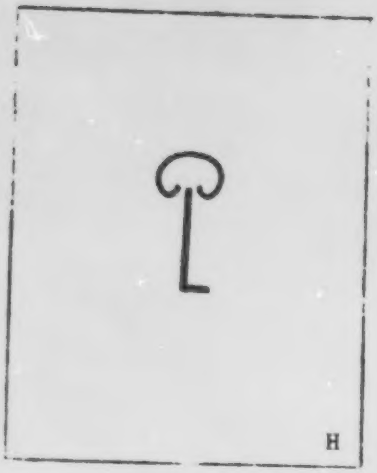
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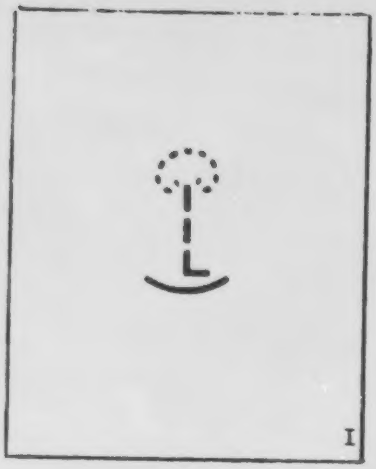
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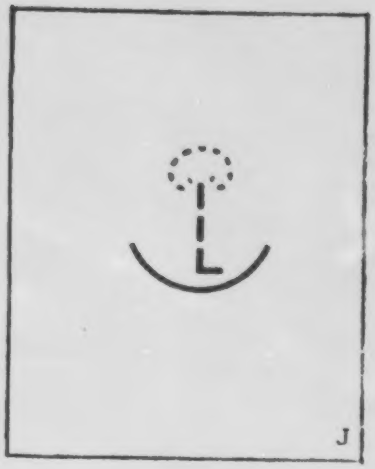
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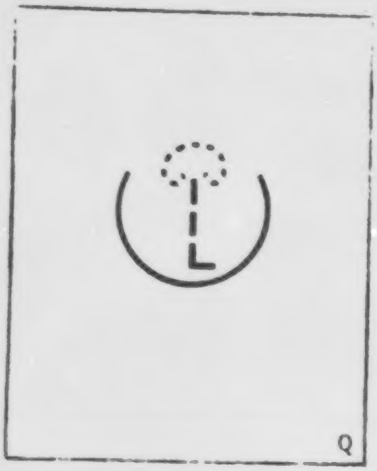
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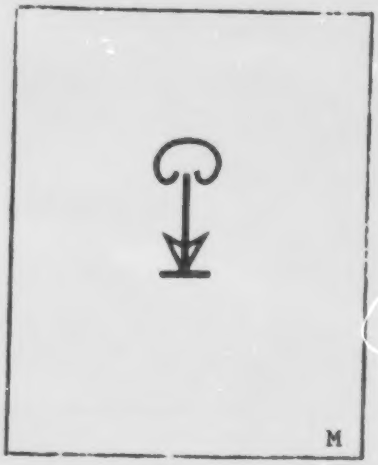
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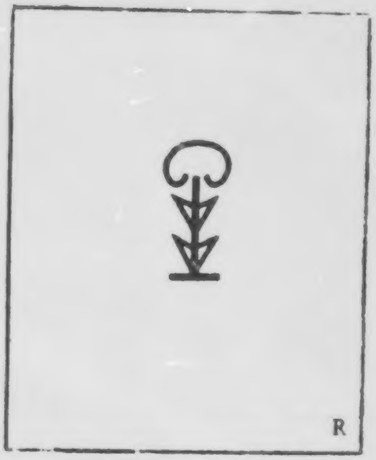
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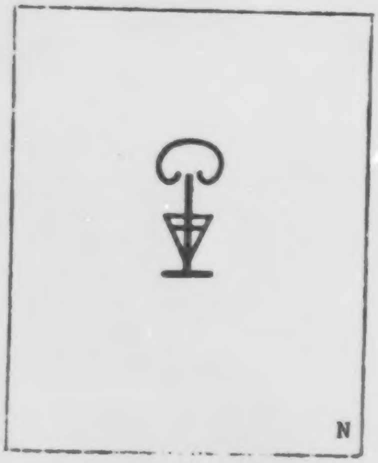
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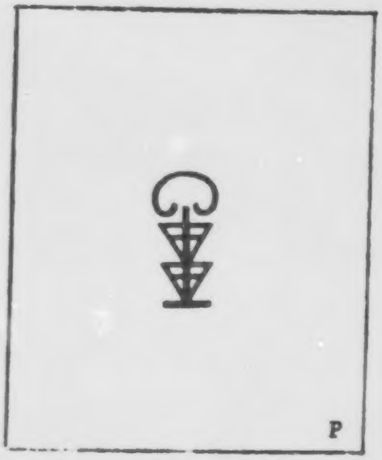
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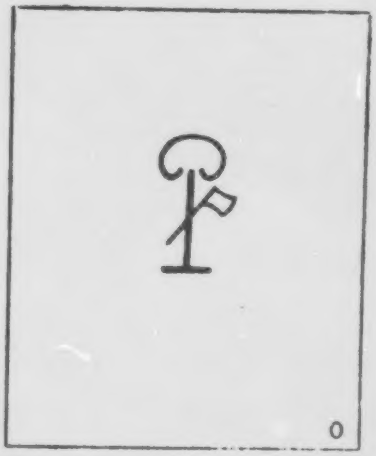
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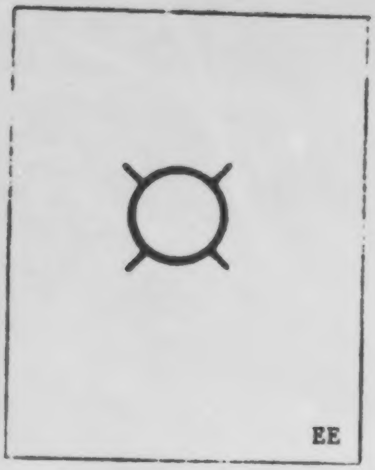
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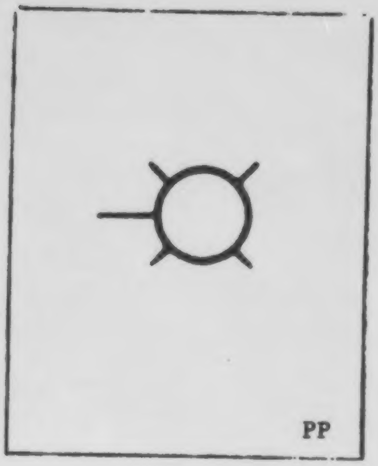
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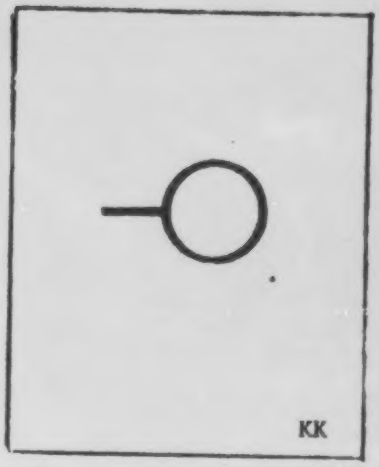
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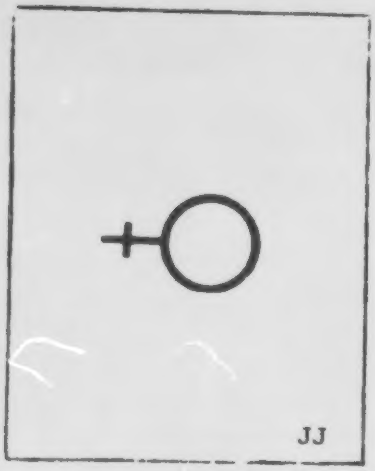
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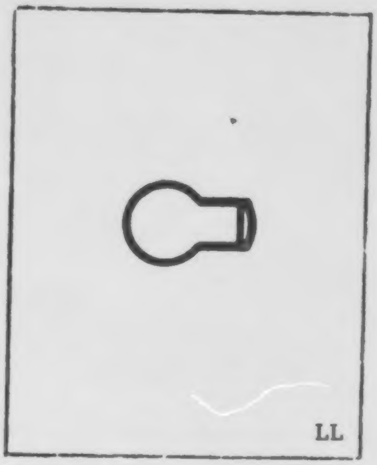
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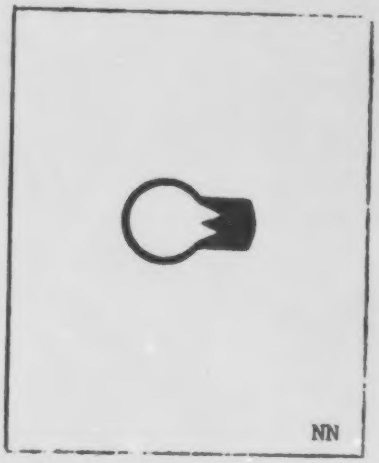
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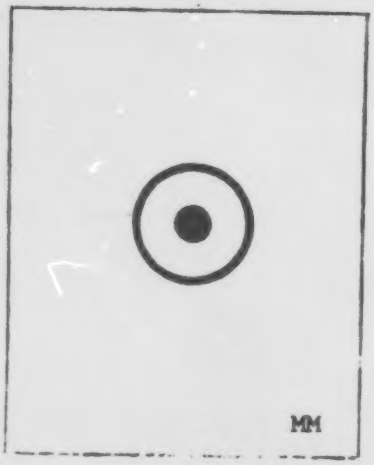
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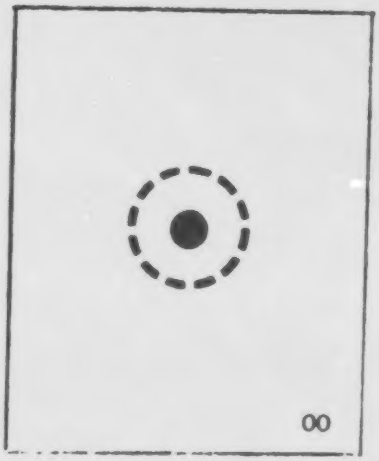
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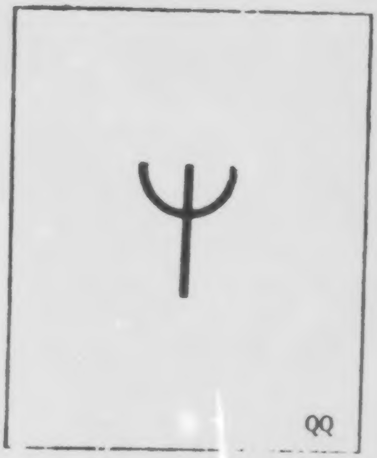
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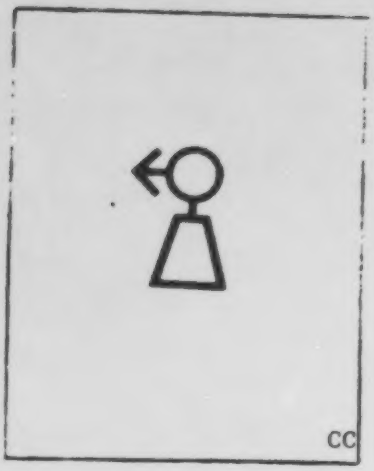
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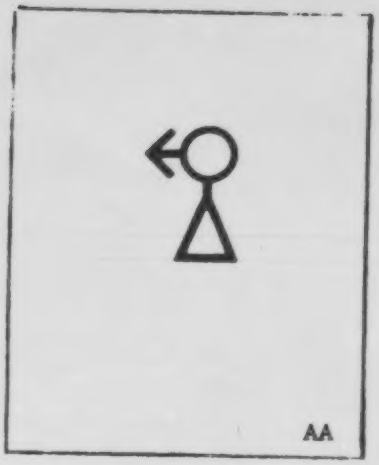
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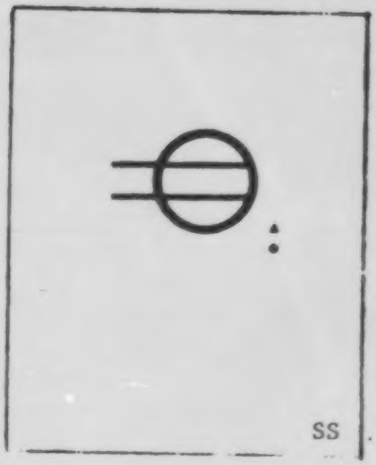
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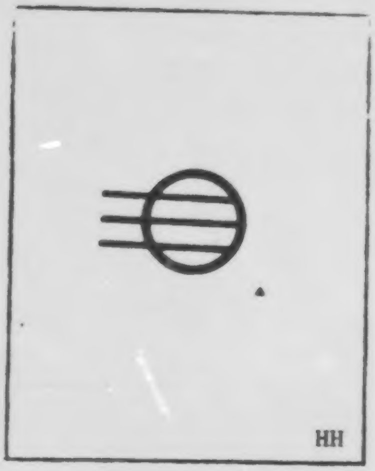
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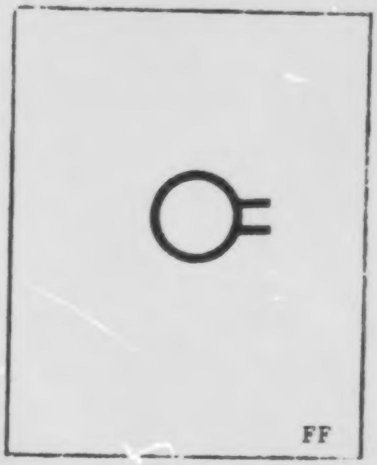
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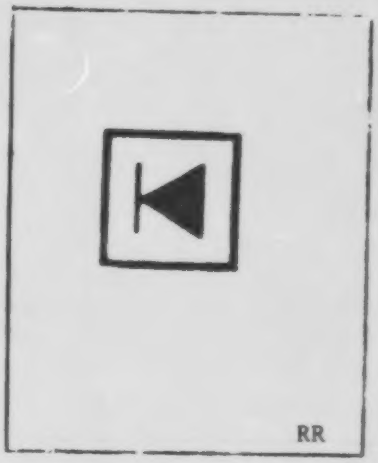
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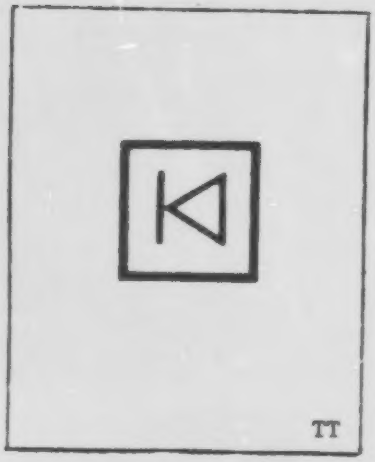
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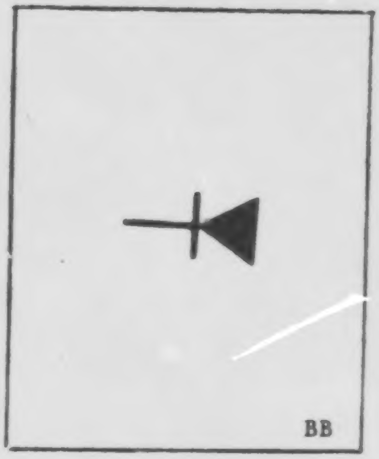
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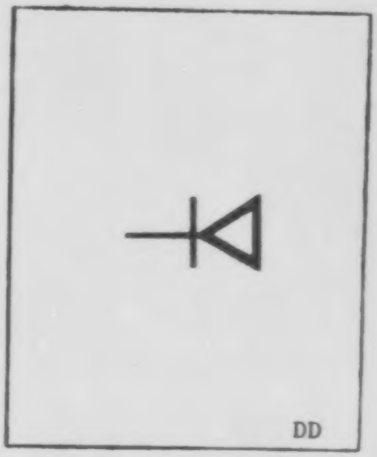
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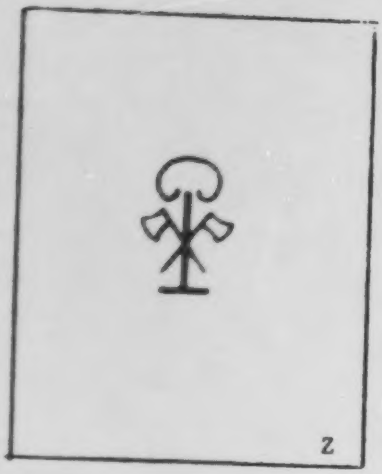
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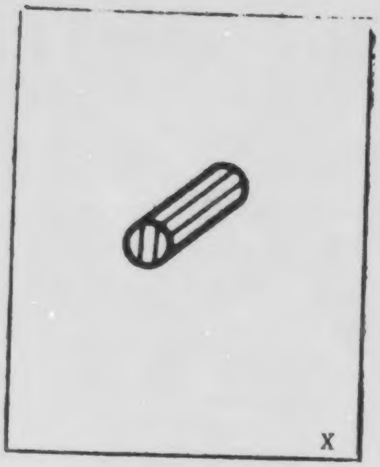
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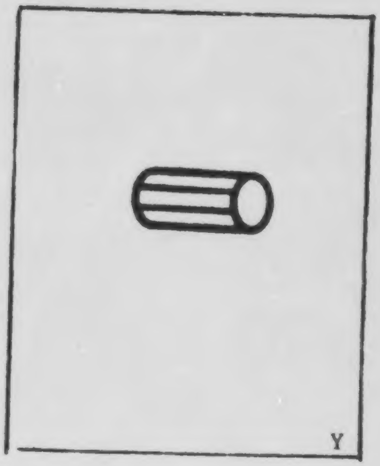
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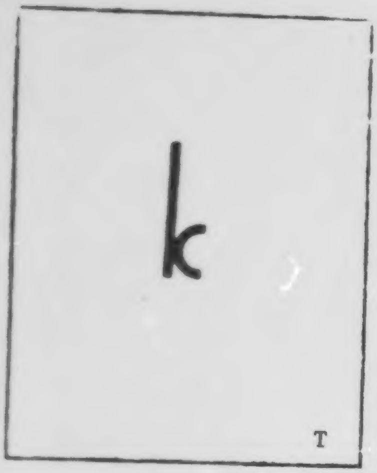
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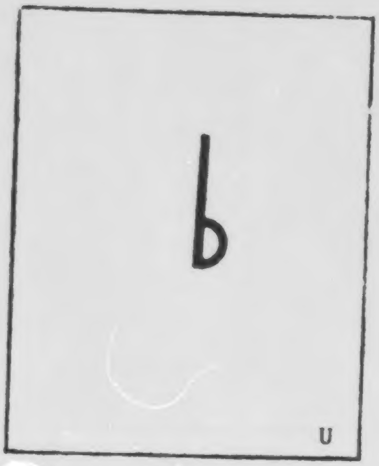
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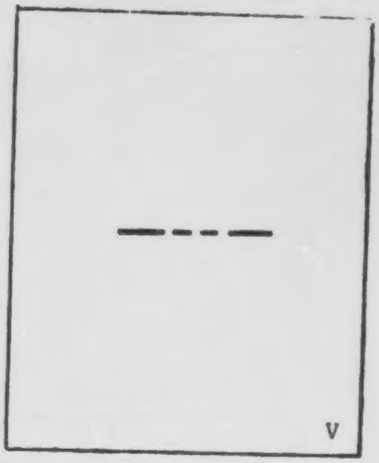
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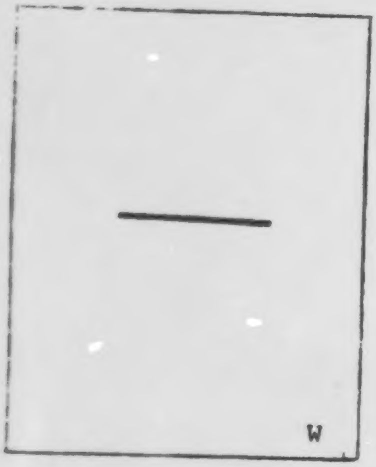
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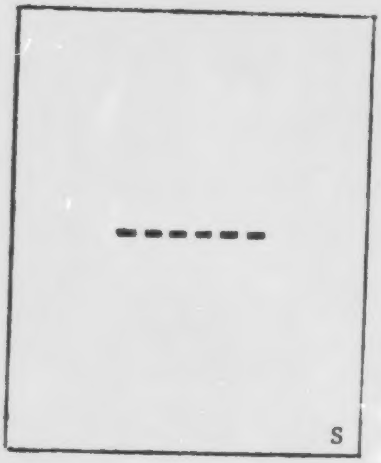
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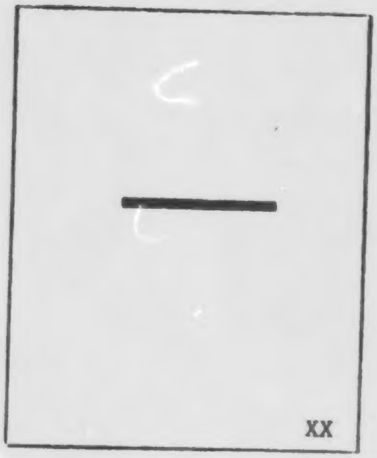
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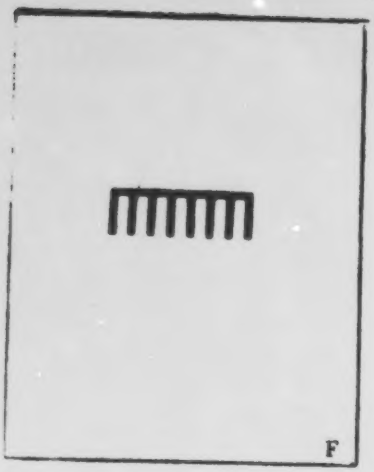
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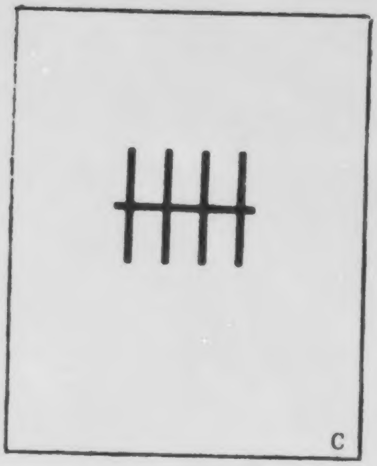
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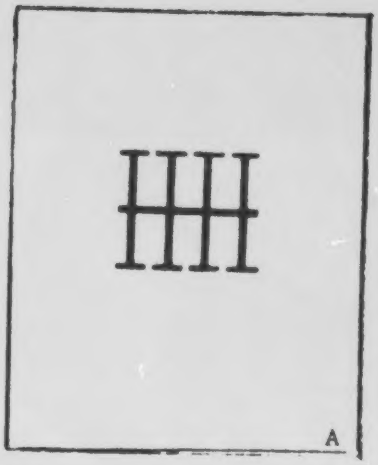
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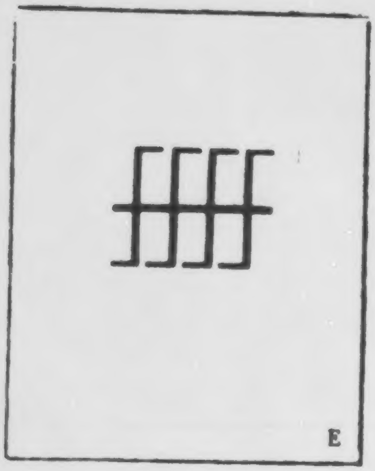
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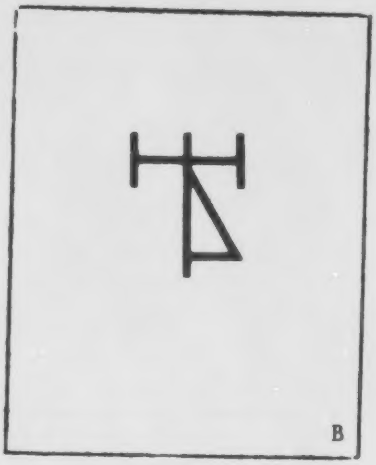
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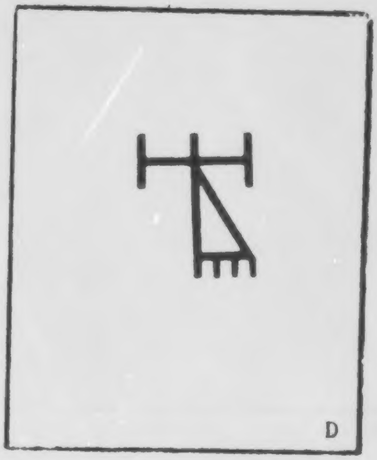
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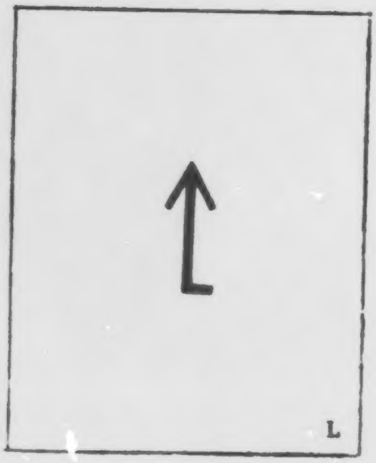
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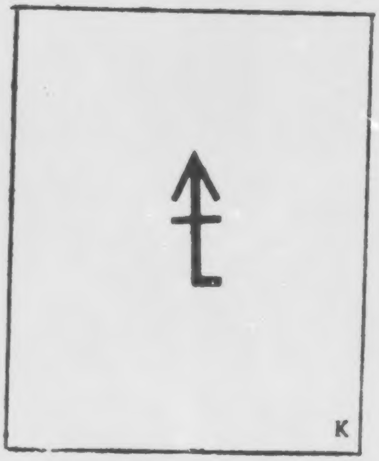
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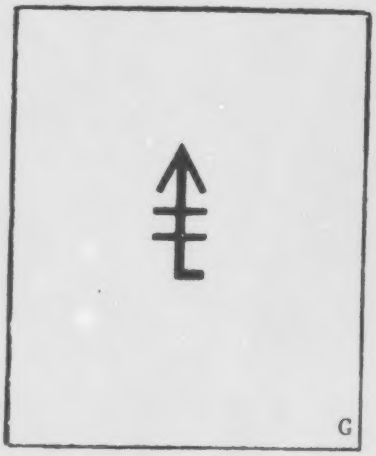
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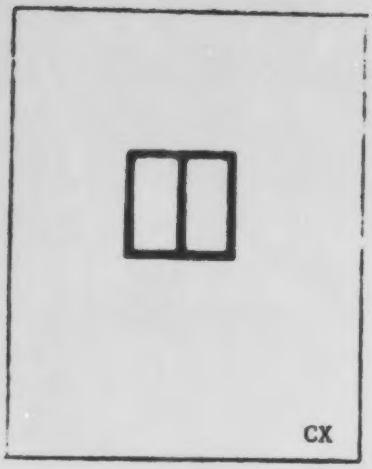
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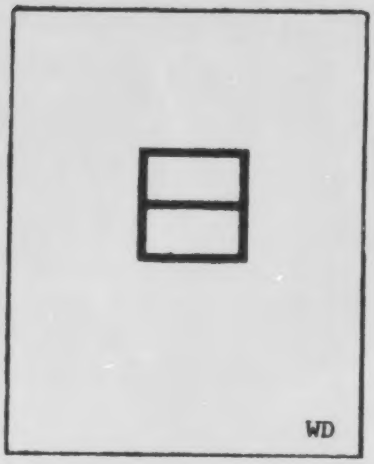
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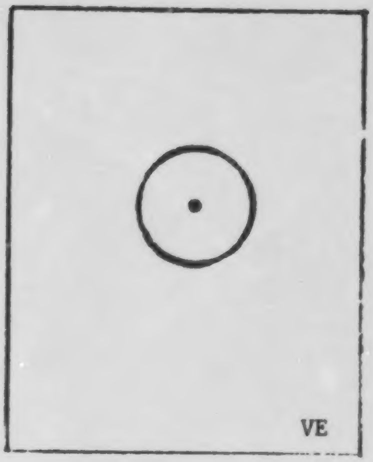
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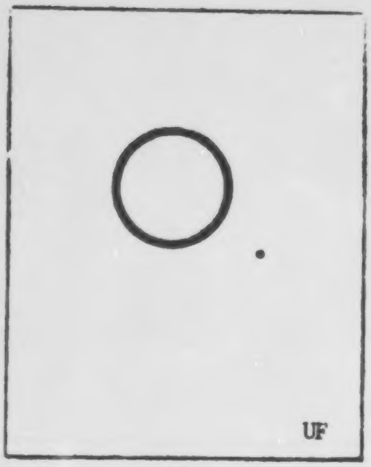
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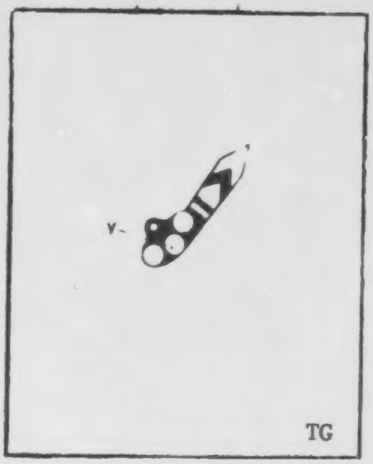
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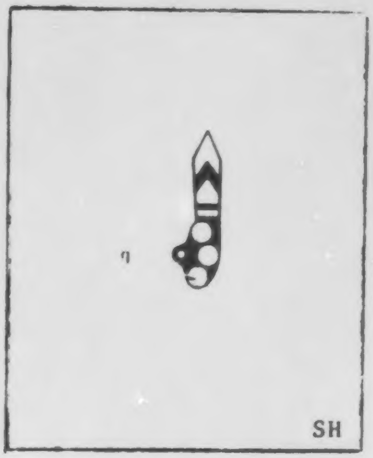
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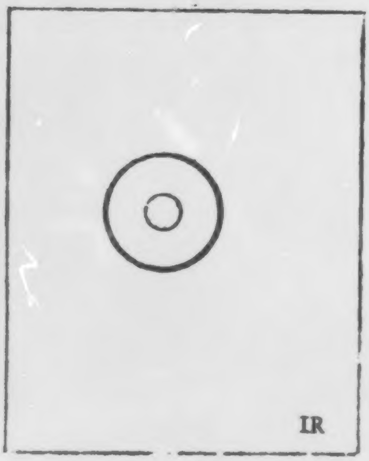
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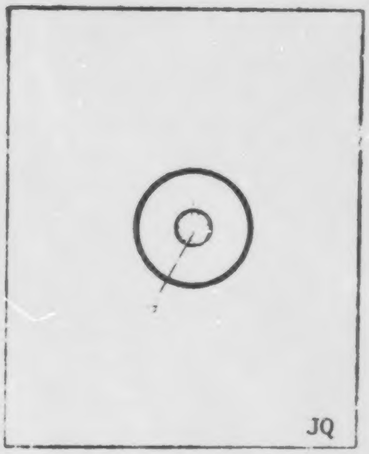
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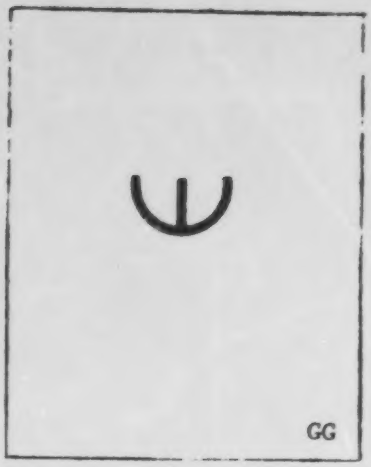
1.9.A
Set 2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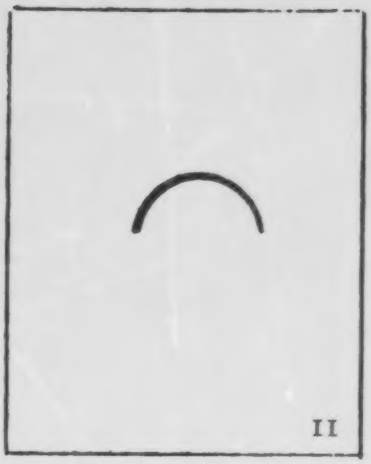
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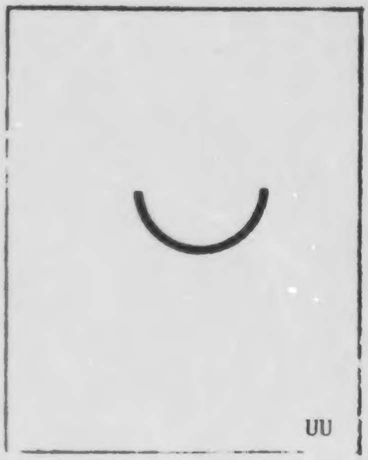
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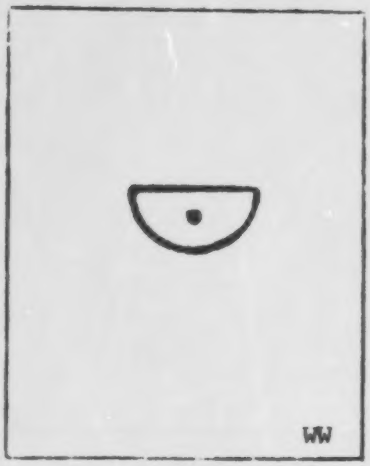
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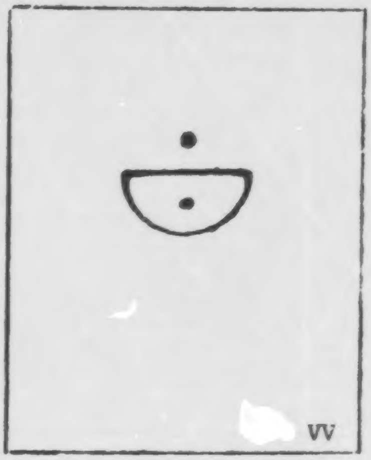
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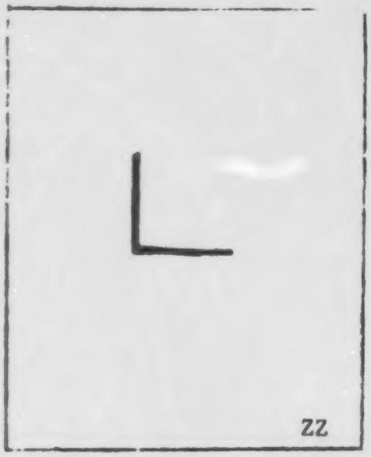
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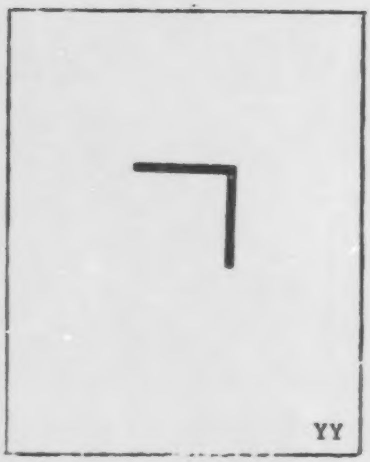
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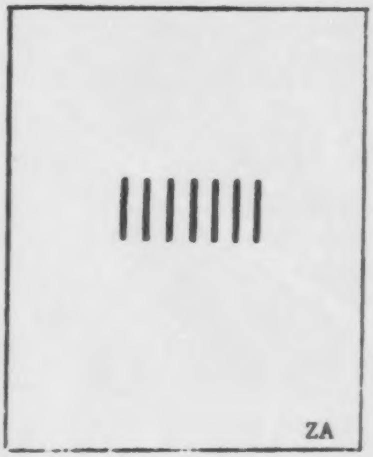
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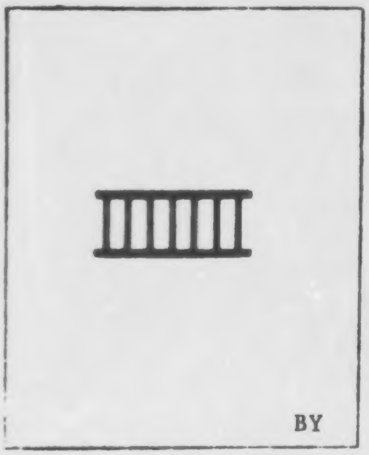

BY

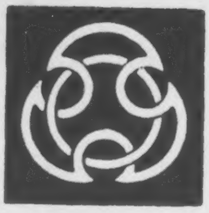
1.9.B

# ANSWER SHEET

1. F
2. C
3. A
4. E
5. B
6. D
7. L
8. K
9. G
10. H
11. I
12. J
13. Q
14. M
15. R
16. N
17. P
18. O
19. Z
20. X
21. Y
22. T
23. U
24. V
25. W
26. S
27. XX
28. CC
29. AA
30. SS
31. HH
32. FF
33. RR
34. TT
35. BB
36. DD
37. EE
38. PP
39. KK
40. JJ
41. LL
42. NN
43. MM
44. OO
45. QQ
46. GG
47. II
48. UU
49. WW
50. VV
51. ZZ
52. YY
53. ZA
54. BY
55. CX
56. WD
57. VE
58. UF
59. TG
60. SH
61. IR
62. JQ

# WHICH ONE DIFFERS ?

A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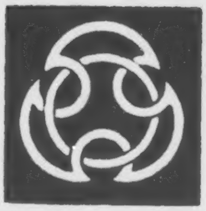
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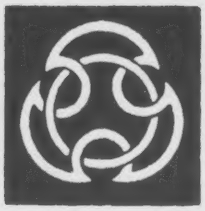
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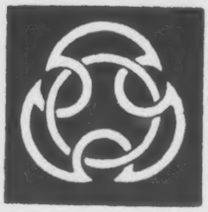
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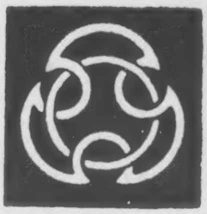
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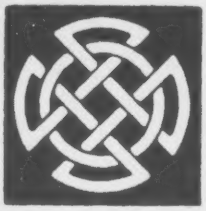
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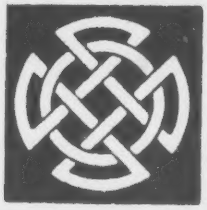
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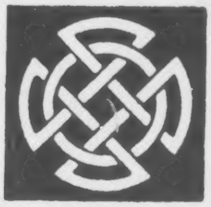
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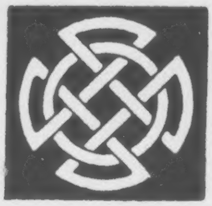
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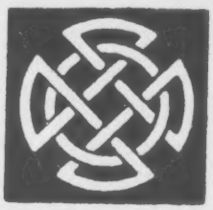
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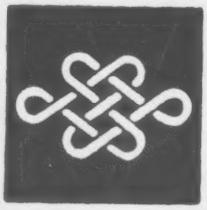
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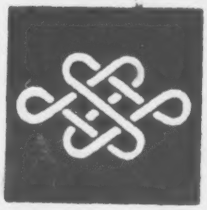
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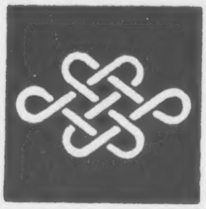
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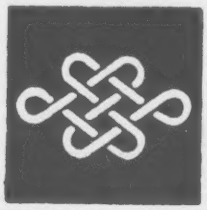
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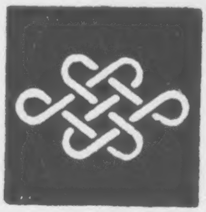
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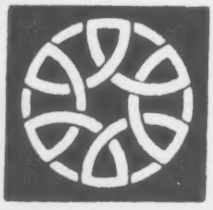
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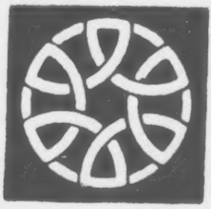
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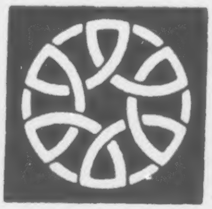
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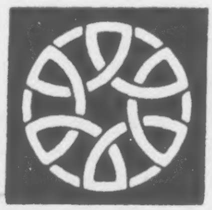
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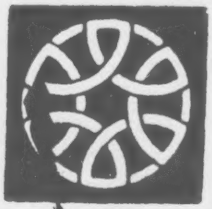
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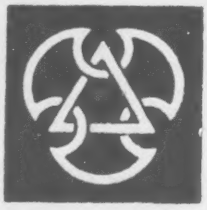
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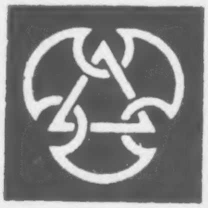
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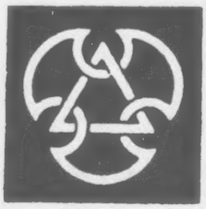
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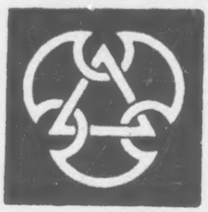
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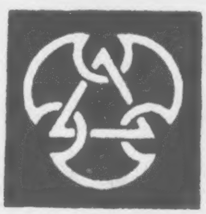
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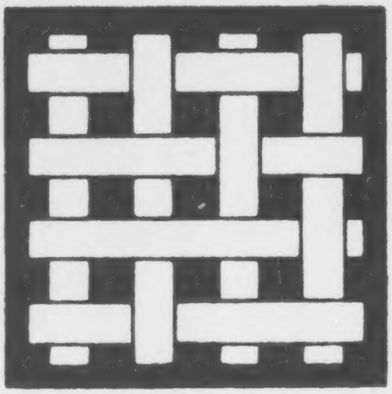
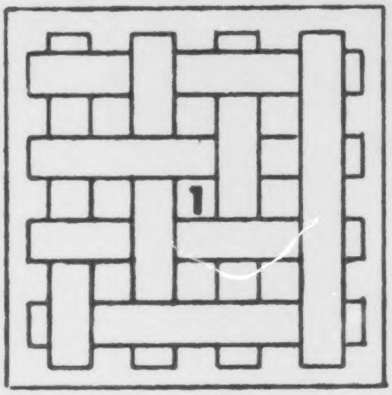
From Aftermath, Book 2, Page 46, Published by Creative Publications, Inc.
Palo Alto, Ca. 94303

# TRELLIS TWISTER

THE TRELLIS IN THE LEFT-HAND CORNER IS ONE OF THE OTHER EIGHT AS SEEN FROM THE BACK SIDE. WHICH ONE?





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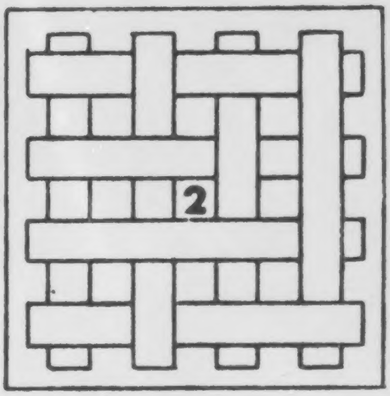

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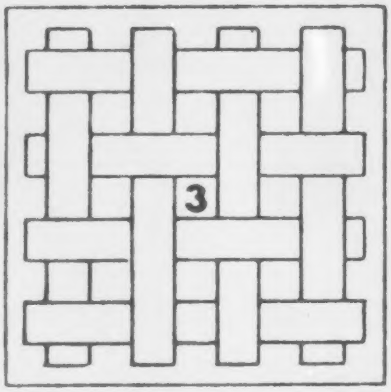

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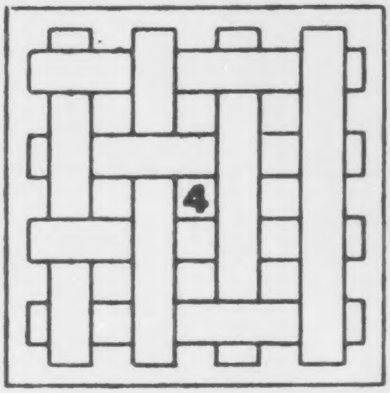

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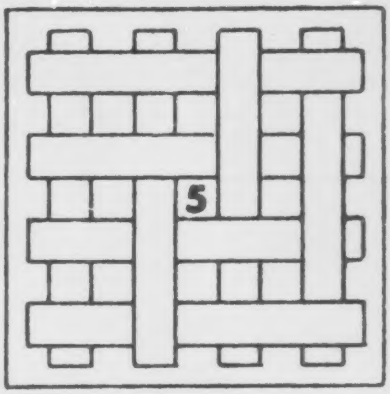

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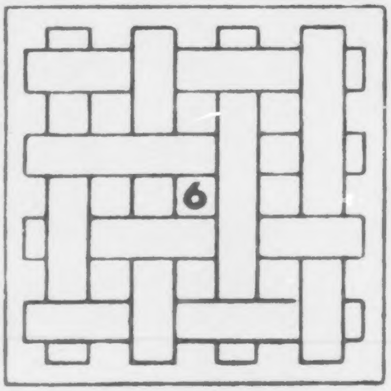

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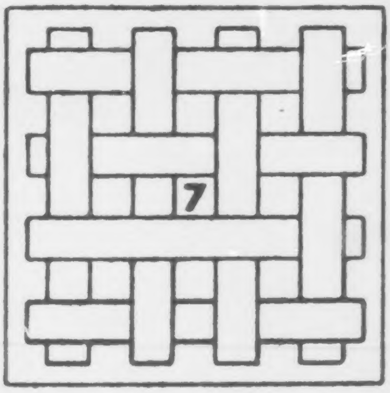

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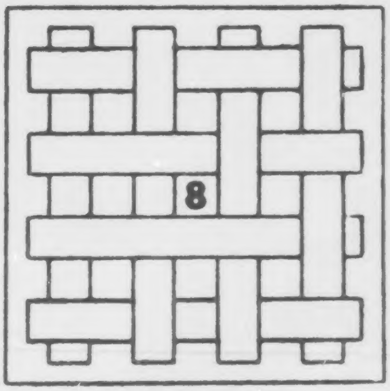

8

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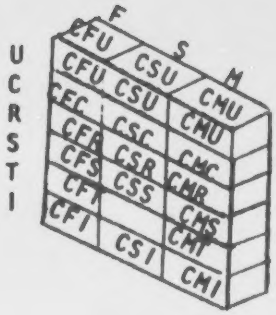
## ANSWER SHEET

1.9.C A = 1
B = 5
C = 2
D = 5
E = 1

1.9.D #4



**Concept** Cognition

**Curricular Objective**

1.10 The child will be able to match pictures, according to similarities in a domino fashion.

**Input**

Discuss importance of perception and being able to see similarities and differences in design, nature etc.

**Learning Opportunities**

I: Teacher prepares packs of cards by cutting them as they have been arranged in domino fashion. There should be 41 cards for each game which includes four double blank ones and eight with a blank on the opposite end. (See 1.10.A)

A: Three to four children may play the game at one time.

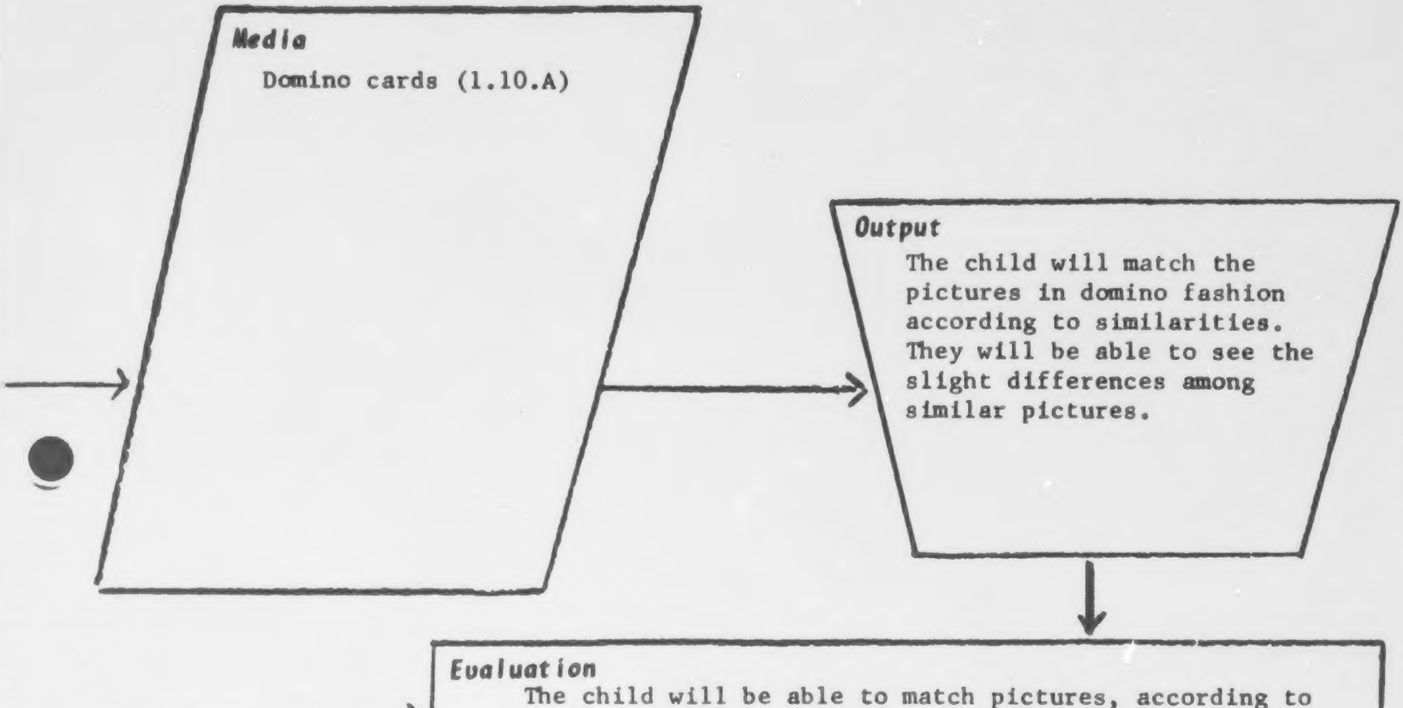
B: The pack of cards is placed face down on the table and each player draws five cards.

C: One child is selected to start the game by placing one of his dominoes face up on the table.

D: The next player on the right must match either end of the domino card, pass, or draw one from the pack.

E: As long as the player can match an end he may have another turn, draw from the pack or pass.

F: First players who gets rid of all his card wins.



**Media**

Domino cards (1.10.A)

**Output**

The child will match the pictures in domino fashion according to similarities. They will be able to see the slight differences among similar pictures.

**Evaluation**

The child will be able to match pictures, according to similarities in a domino fashion.

Aftermath Book 1, Page 4

**Enrichment**

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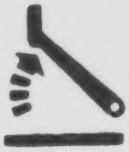
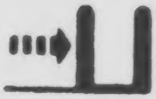
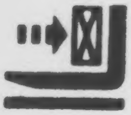
Page 61
Page 77

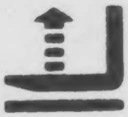
Visual Discrimination Matching Cards Set III - AV #278

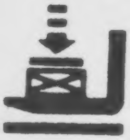
Design Dominoes - AV #205

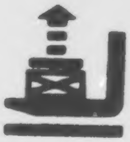


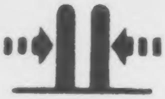


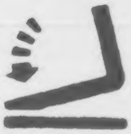


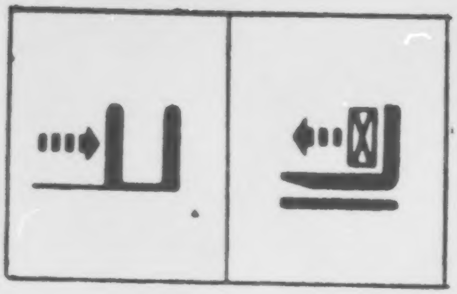


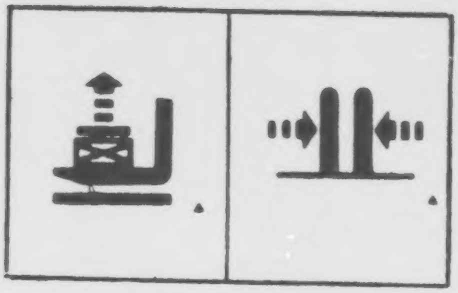


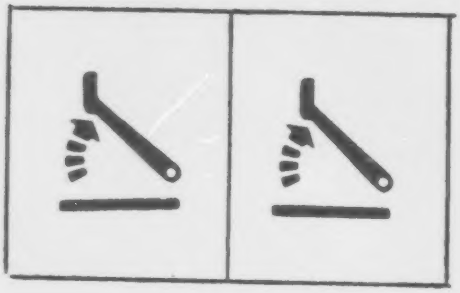


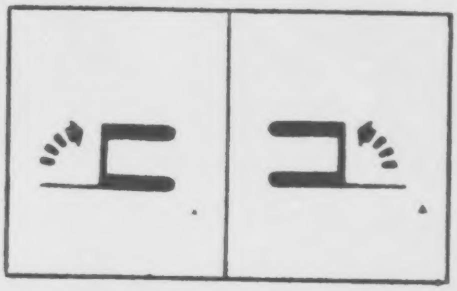


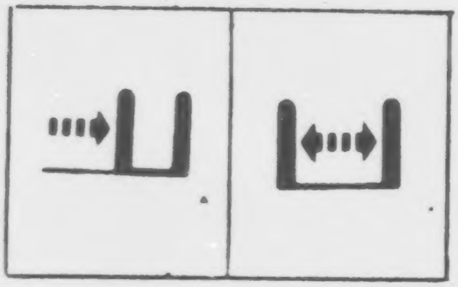


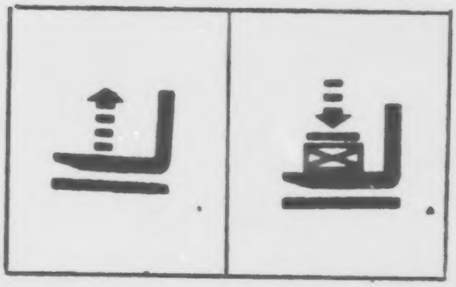


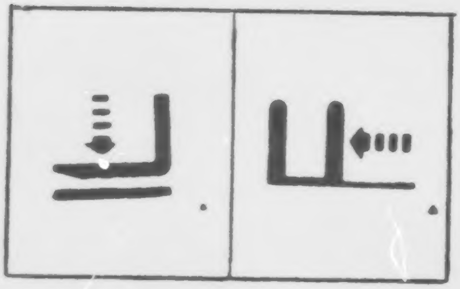


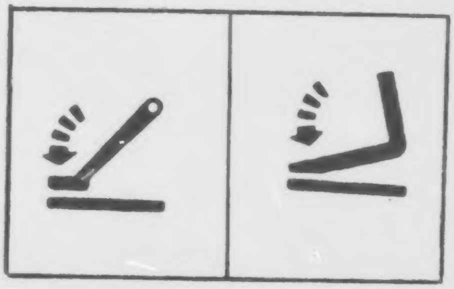


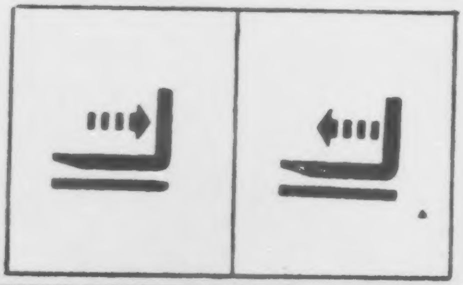


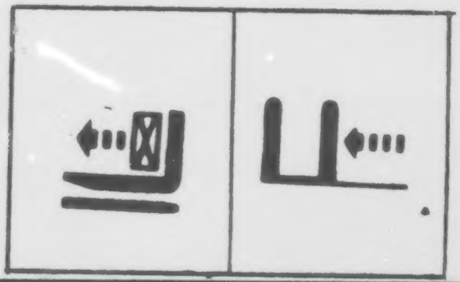


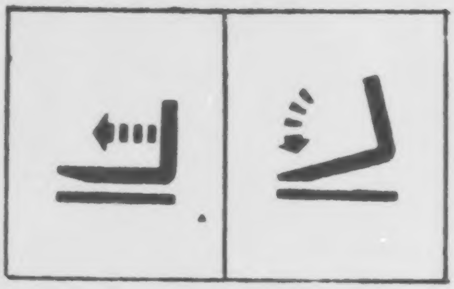


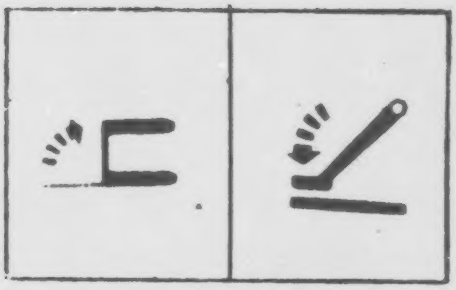


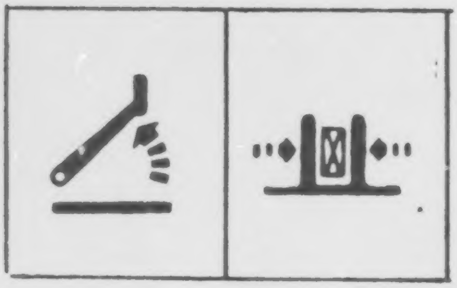


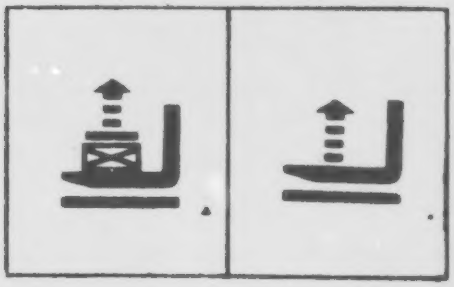


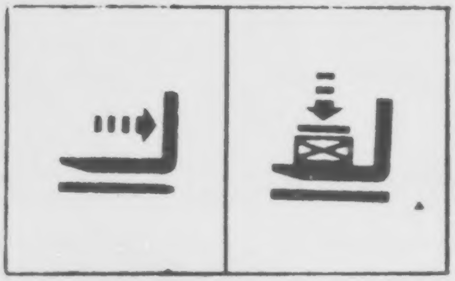


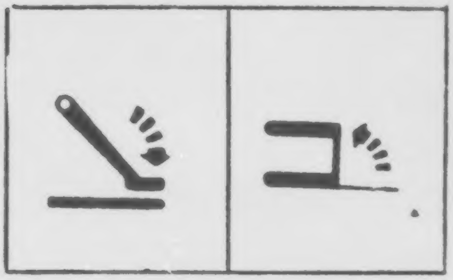


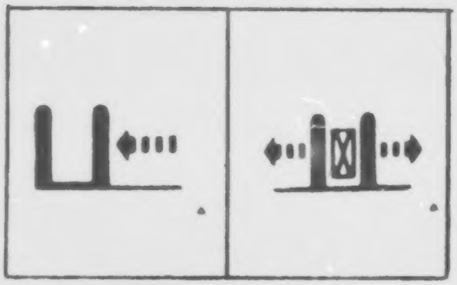


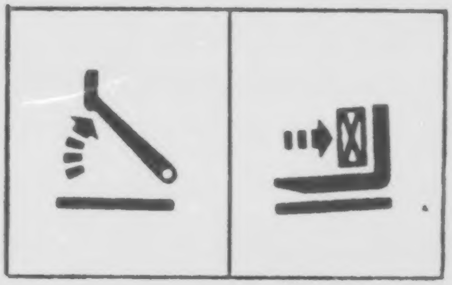


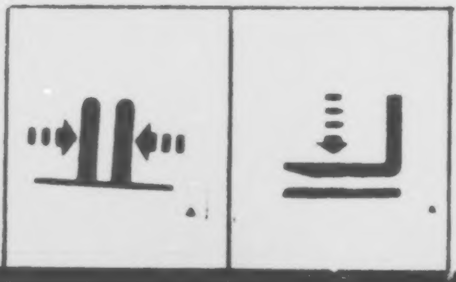


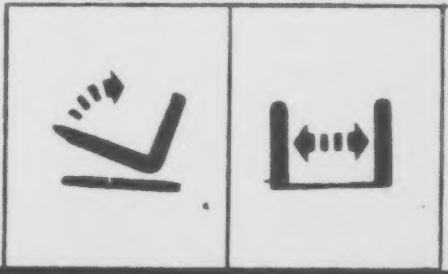


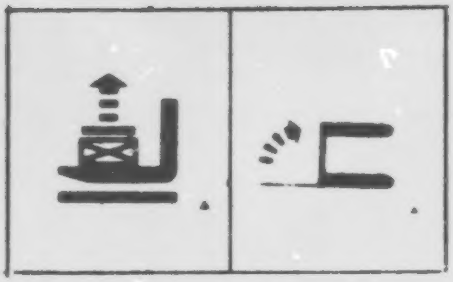


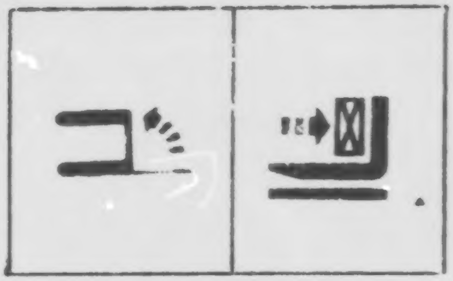


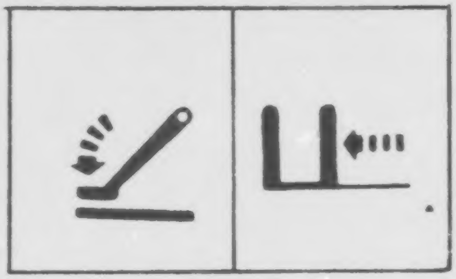


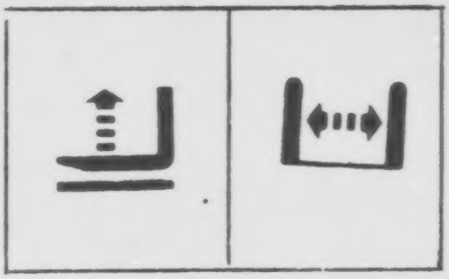


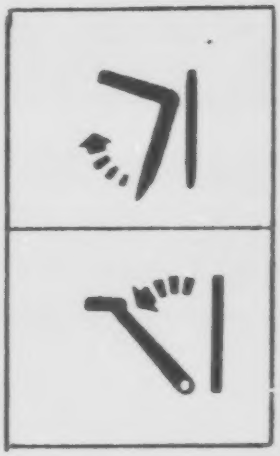


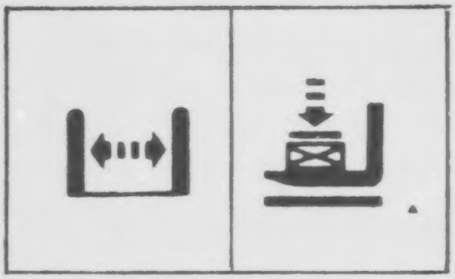


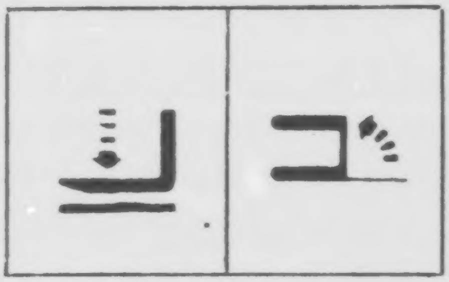


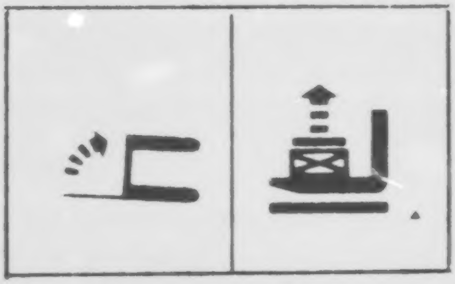


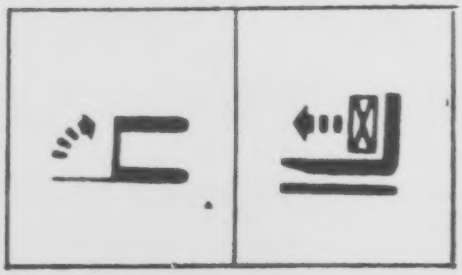


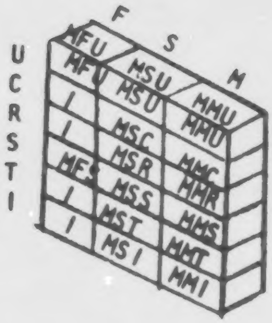








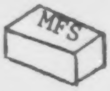




**Concept** Memory

**Curricular Objective**

2.1 The child will be able to remember and reproduce the placement of given black and white geometric figures.



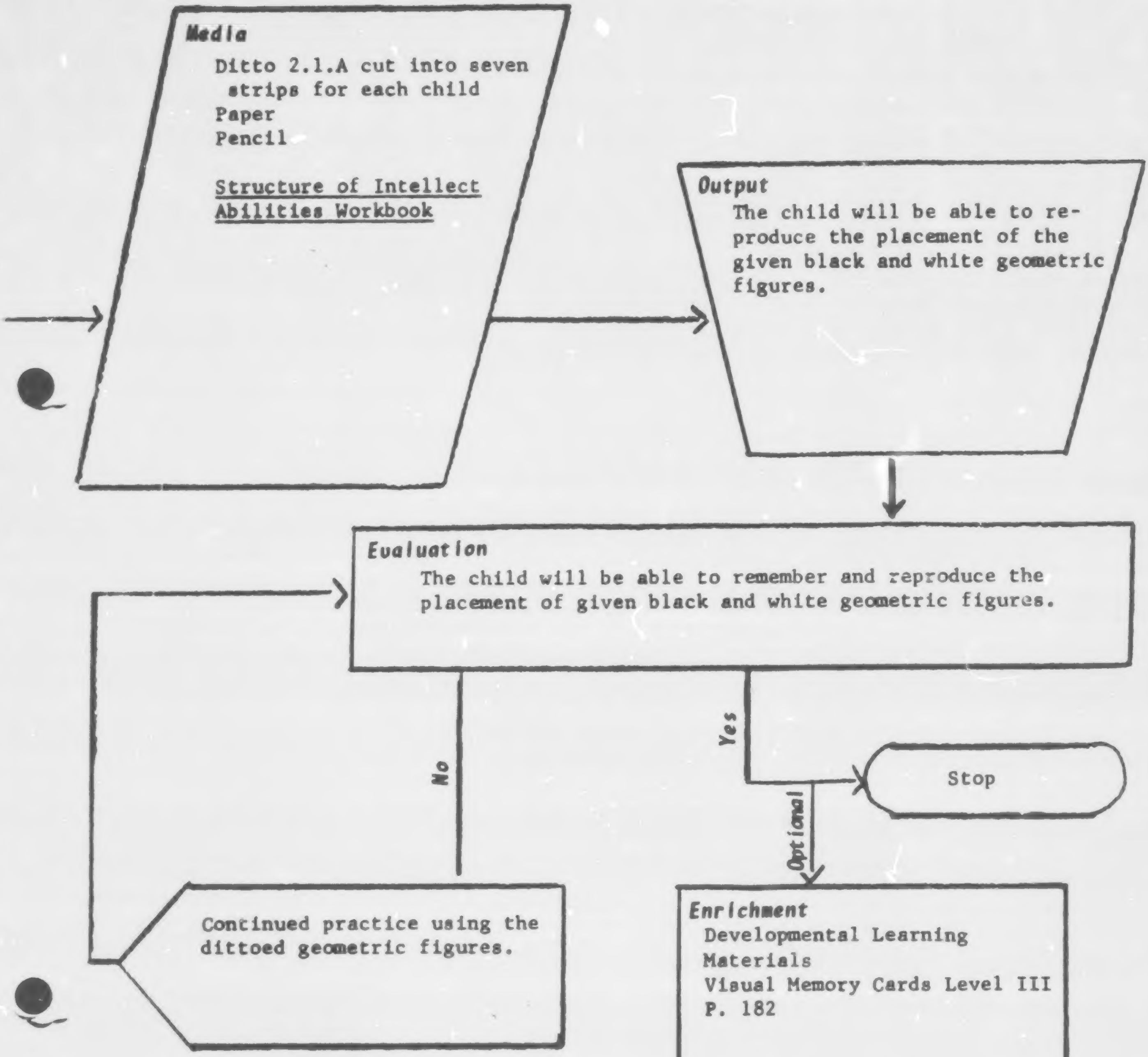
**Input**

Discuss the advantage of a good memory and how through our own determination we can improve it.

**Learning Opportunities**

I: The teacher distributes seven strips of dittoed black and white geometric figures to each child. (See 2.1.A)

- A: Each child places the pile of seven strips face down on the desk with number one strip on top.
- B: The child turns over the top strip, studies it, turns it face down and reproduces it on his paper.
- C: The child then studies each strip in turn and reproduces it from memory.
- D: After he has finished he turns up the strips and checks his work.



**Media**

Ditto 2.1.A cut into seven strips for each child

Paper

Pencil

Structure of Intellect Abilities Workbook

**Output**

The child will be able to reproduce the placement of the given black and white geometric figures.

**Evaluation**

The child will be able to remember and reproduce the placement of given black and white geometric figures.

Continued practice using the dittoed geometric figures.

Stop

**Enrichment**

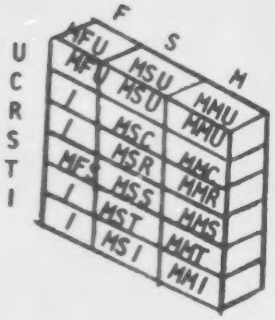
Developmental Learning Materials

Visual Memory Cards Level III

P. 182

2.1.A

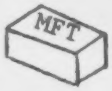
1. ● ● ○ ○ ○ ○ ●
2. □ ○ ○ ● ● □ ●
3. □ ● ○ ○ ● ■ ●
4. ■ ○ ● ○ ○ ■ ●
5. □ ○ ○ ○ □ ○ ○
6. ○ ● ○ ● □ ● ○
7. ● ○ ■ ○ □ ○ □



**Concept** Memory

**Curricular Objective**

2.2 The child will be able to reproduce the original face displayed on a transparency on an overhead projector.



**Input**

Discuss the importance of memory and how it can affect your school work, home responsibilities and even the social aspect of one's life.

**Learning Opportunities**

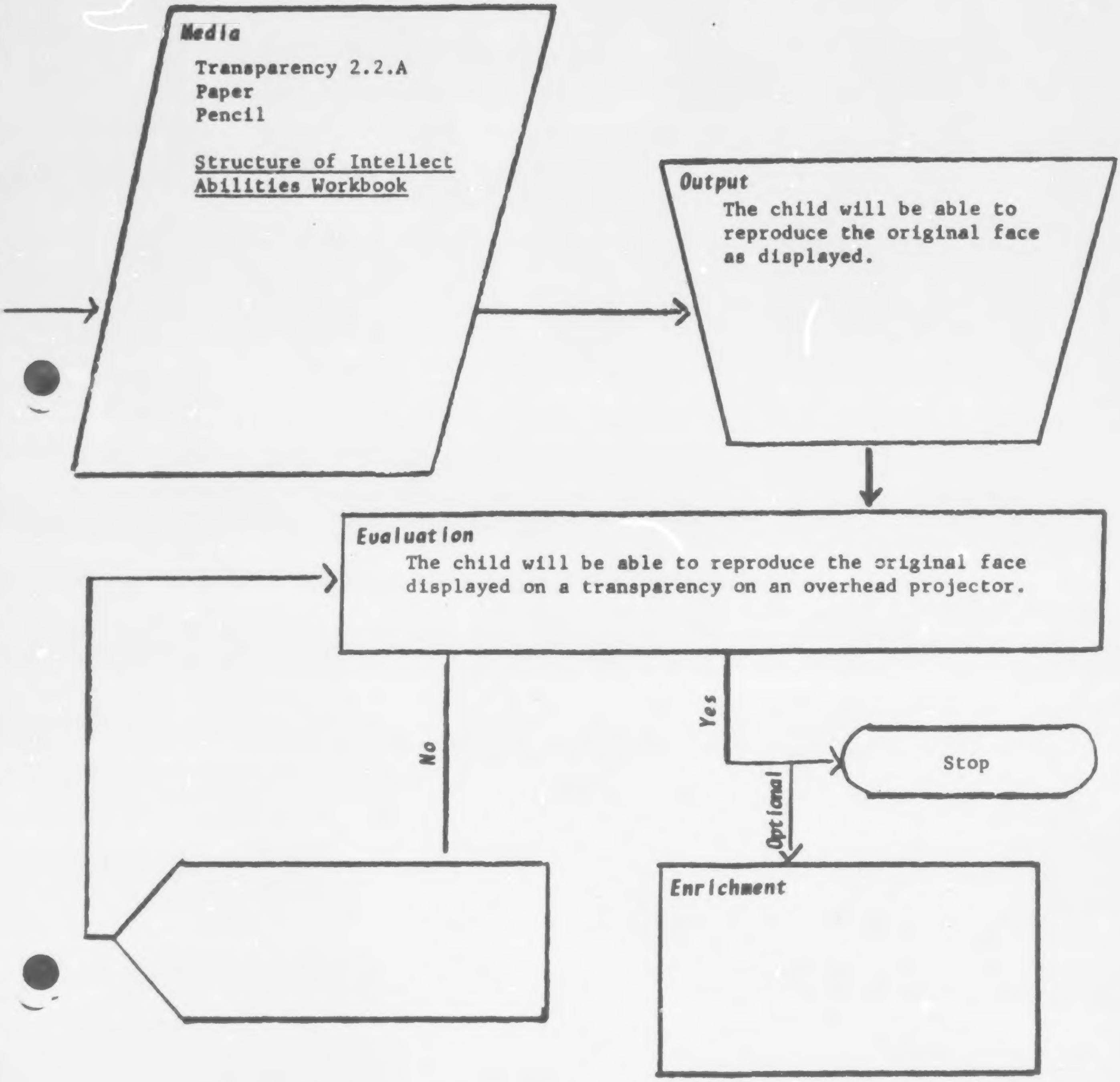
I: The teacher displays a transparency (See 2.2.A) showing both a smiling and frowning face combined into one picture.

A: The teacher displays the funny face first showing the angry frown and mustache and asks the children to observe the picture.

B: Rotate the face to the funny face smile and allow the children to observe the picture.

C: Remove the face from view. Instruct the student to reproduce the original face he saw displayed.

D: After drawing turn on overhead for students to check selves.



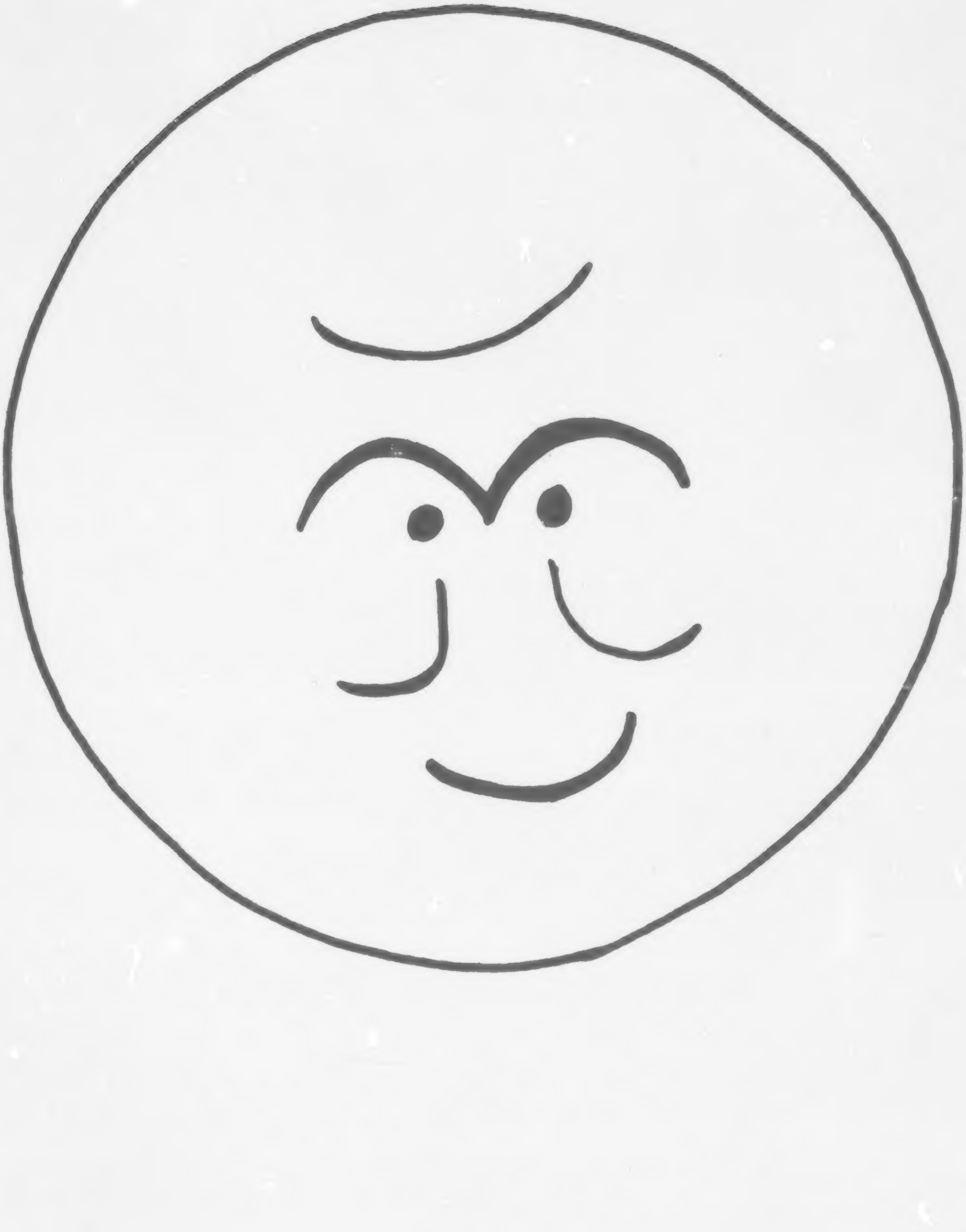
Media
Output
Evaluation
Yes
No
Stop
Optional
Enrichment

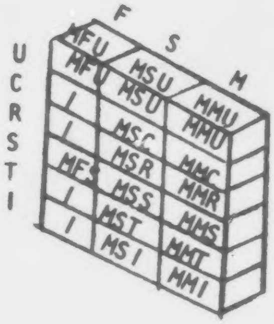
Transparency 2.2.A
Paper
Pencil

Structure of Intellect Abilities Workbook

The child will be able to reproduce the original face as displayed.

The child will be able to reproduce the original face displayed on a transparency on an overhead projector.

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MMU
MSC
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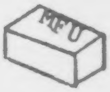
MSR
MMR
MFS
MSS
MMS
MST
MMT
MSI
MMI

**Concept** Memory

**Curricular Objective**

2.3 The child will be able to remember details of given pictures shown on an overhead transparency and will be able to answer questions about the picture.

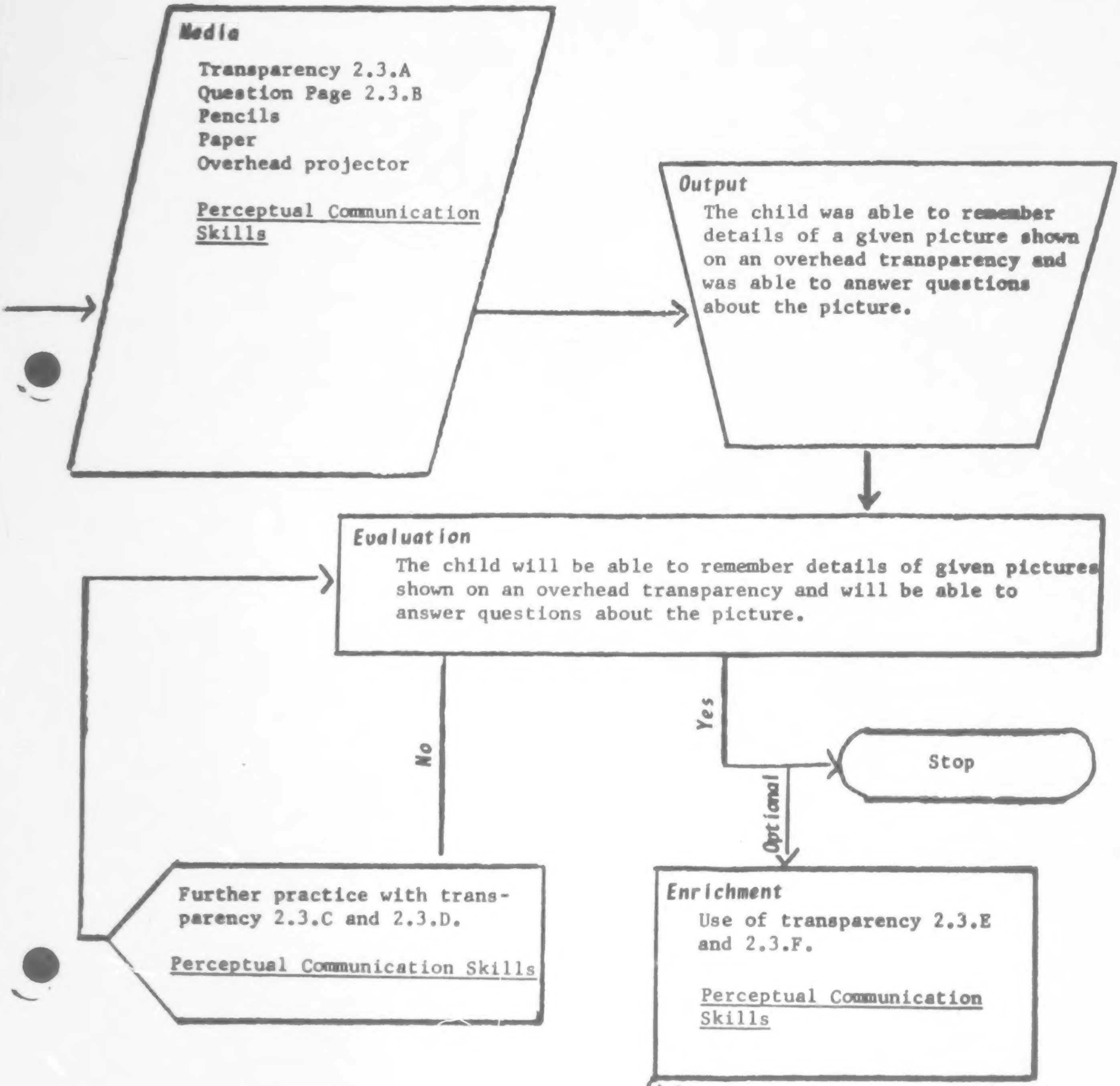


**Input**

Review the advantages of a good memory with the class.

**Learning Opportunities**

I: The teacher will display a transparency (See 2.3.A) on the overhead projector.
  A: Instructions are given to the children to observe the picture for three minutes checking all details about the picture.
  B: The overhead is turned off and the children are asked questions concerning the picture. (See 2.3.B)
  C: The overhead projector is turned on after the question period to check answers.



**Media**

Transparency 2.3.A
Question Page 2.3.B
Pencils
Paper
Overhead projector

Perceptual Communication Skills

**Output**

The child was able to remember details of a given picture shown on an overhead transparency and was able to answer questions about the picture.

**Evaluation**

The child will be able to remember details of given pictures shown on an overhead transparency and will be able to answer questions about the picture.

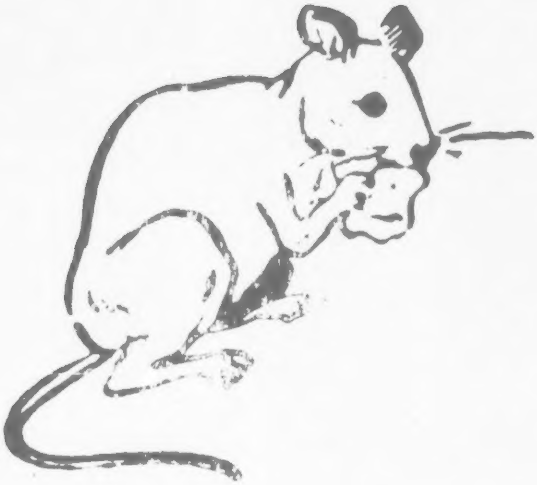
Further practice with transparency 2.3.C and 2.3.D.

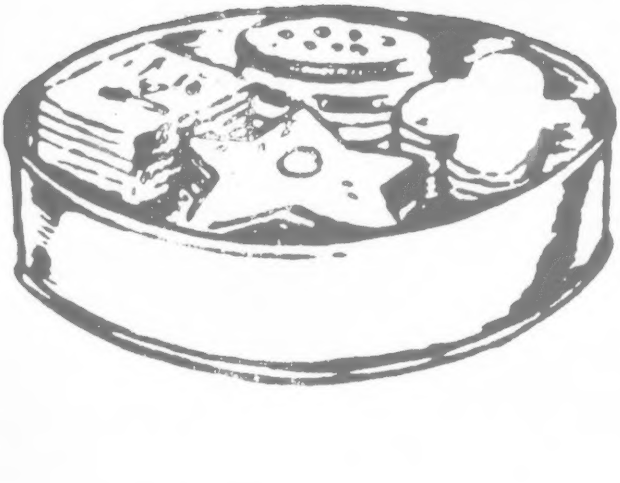
Perceptual Communication Skills

**Enrichment**

Use of transparency 2.3.E and 2.3.F.

Perceptual Communication Skills





From Perceptual Communication Skill Series, Selma Herr. IMED Instructional Materials and Equipment Distributors

Answer these questions.

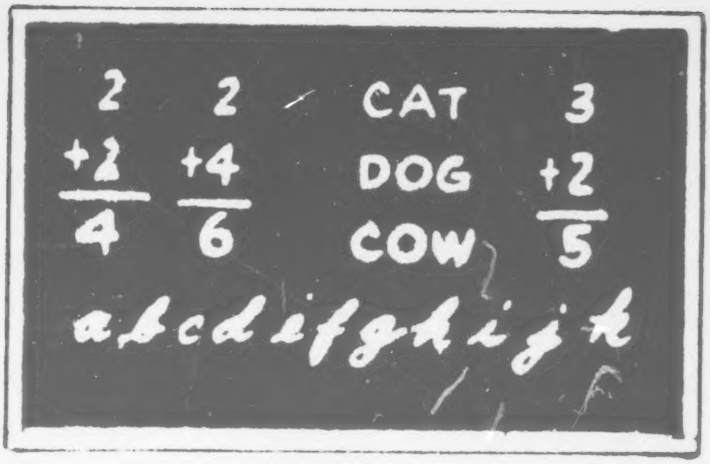
Mouse:

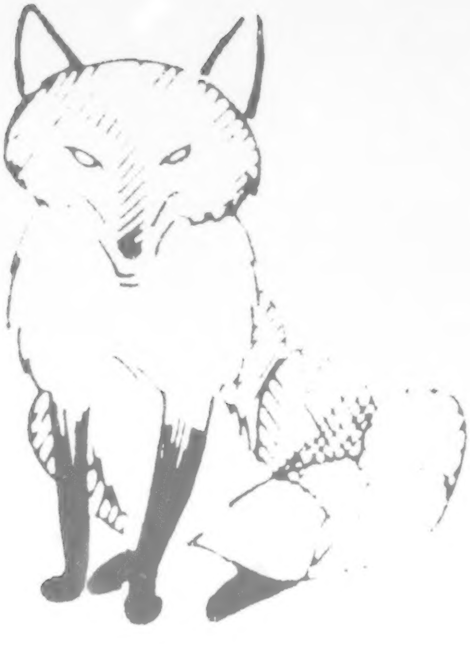
1. How many feet did you see?
2. How many ears did you see?
3. What was the mouse doing?
4. Where was its tail?

Tin Box:

1. What was in the box?
2. How many do you think were in the box?
3. Draw one of each of the things you saw in the box.

From Perceptual Communication Skill Series, Selma Herr. IMED Instructional Materials and Equipment Distributors


2
+2
4
2
+4
6
CAT
DOG
COW
3
+2
5
abcdefghijk



From Perceptual Communication Skill Series, Selma Herr. IMED Instructional Materials and Equipment Distributors

Answer these questions.

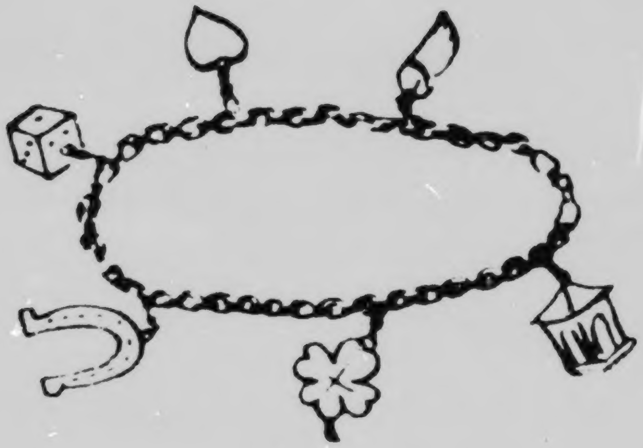
Blackboard:

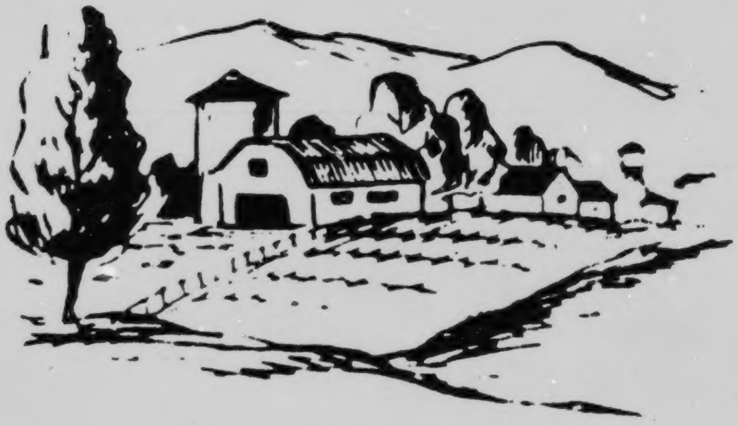
1. How many words did you see?
   What were the words?
2. What were the problems?
3. How many letters did you see?
   Write them.

Fox:

1. How many legs did you see?
2. How many feet did you see?
3. How many eyes did you see?
4. Was his tongue hanging out?

From Perceptual Communication Skill Series, Selma Herr. IMED Instructional Materials and Equipment Distributors





From Perceptual Communication Skill Series, Selma Herr. IMED Instructional

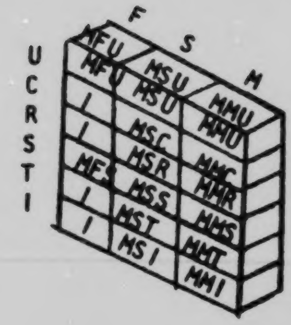
Bracelet:

1. Draw the charms you saw.

Farm:

1. Draw the farm.

From Perceptual Communication Skill Series, Selma Herr. IMED Instructional Materials and Equipment Distributors



**Concept** Memory

**Curricular Objective**

2.4 The child shown a card with patterns will be able to copy the figure from memory and gradually decrease the time it takes him to do it.

**Input**

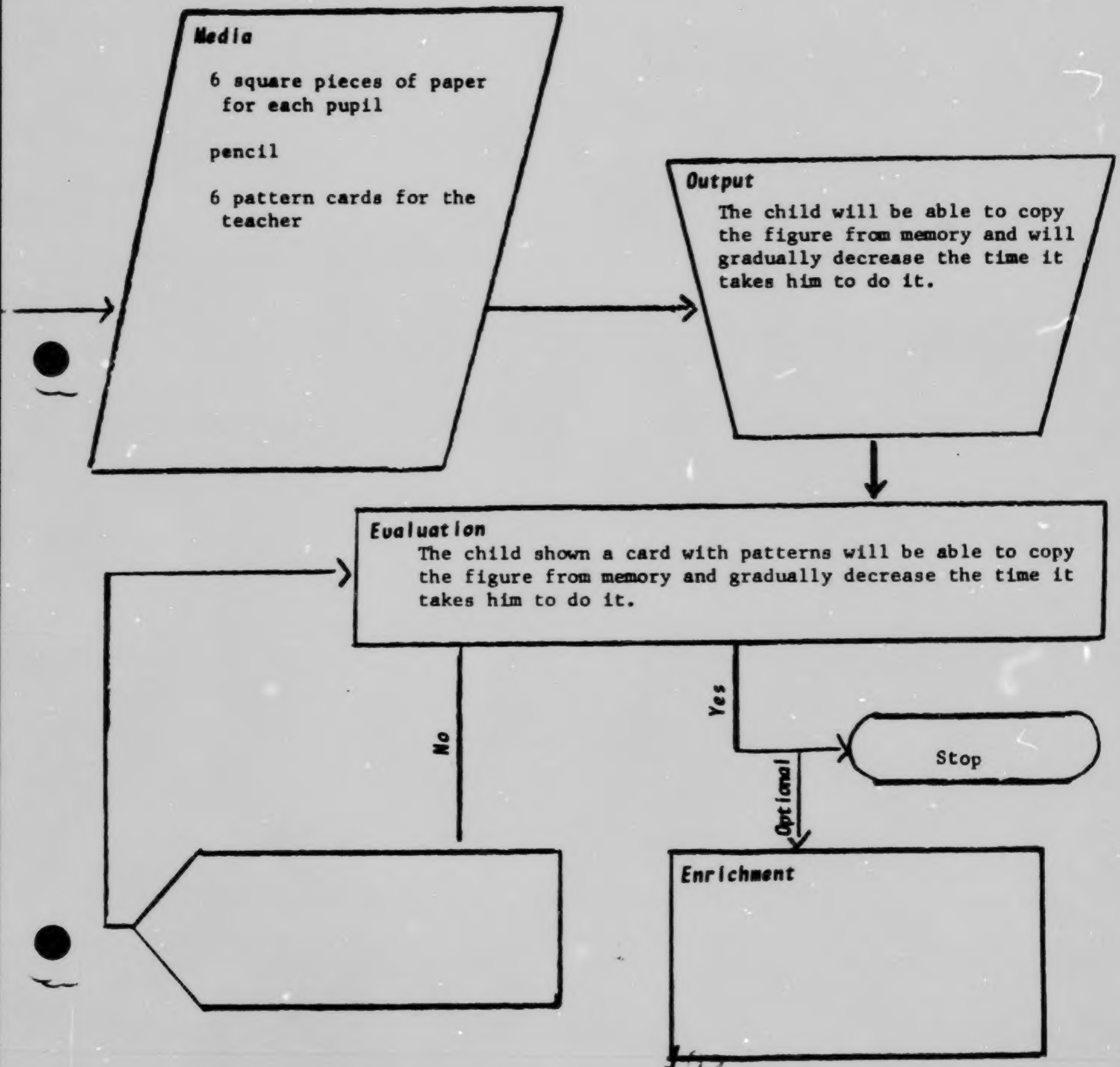
Discuss memory as a vital factor in not only learning but essential in every day life. Point out that through practice and concentration one can help increase his memory.

Emphasize that each individual is responsible for helping himself improve, no one else can do it for you.

**Learning Opportunities**

I: Teacher distributes six square pieces of paper to each child.
  A: The teacher holds up pattern cards one by one.
  B: The child copies the pattern card on his square piece of paper.
  C: The teacher puts the pattern card away.
  D: The child turns his square piece of paper over and copies the figure from memory.
  E: Go through all pattern cards in the same way.

II: Repeat practices with these cards at evenly distributed times.
  A: Child should be able, through continued practice, increase his ability to reproduce the figures from memory.
  B: He should decrease his time in copying the figures.



**Media**

6 square pieces of paper for each pupil

pencil

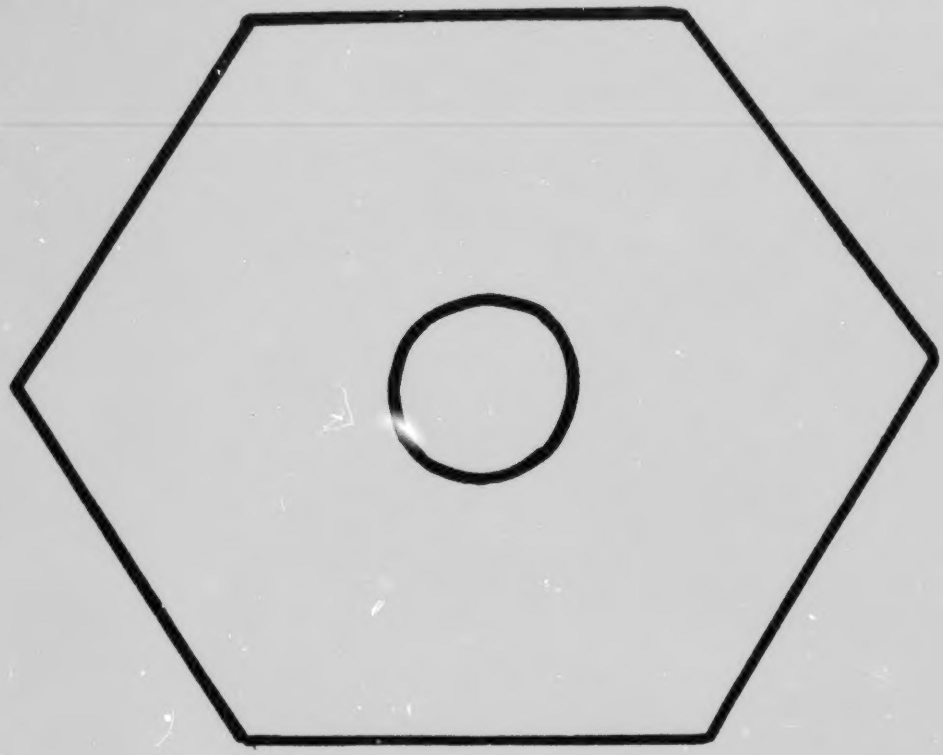
6 pattern cards for the teacher

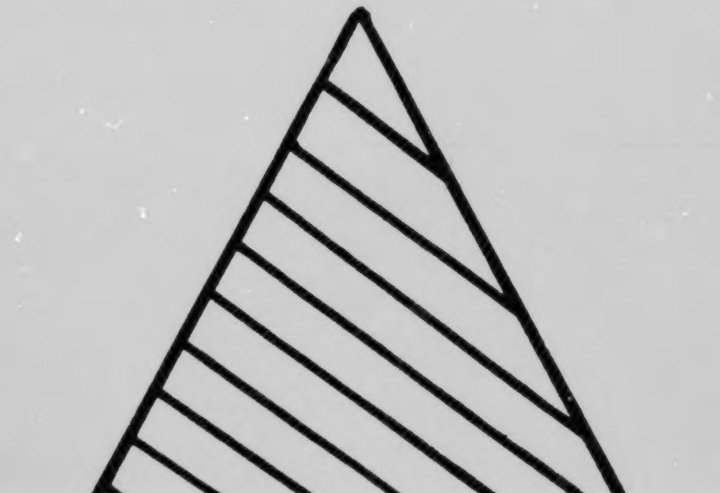
**Output**

The child will be able to copy the figure from memory and will gradually decrease the time it takes him to do it.

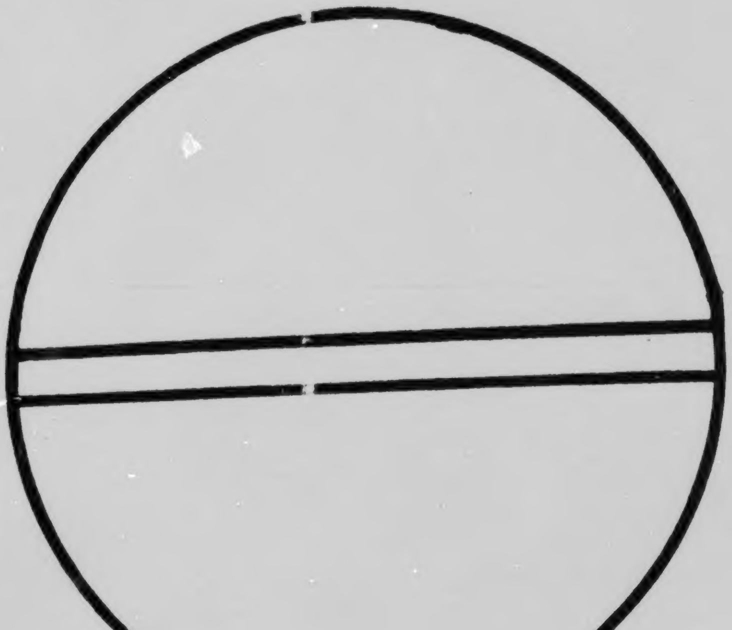
**Evaluation**

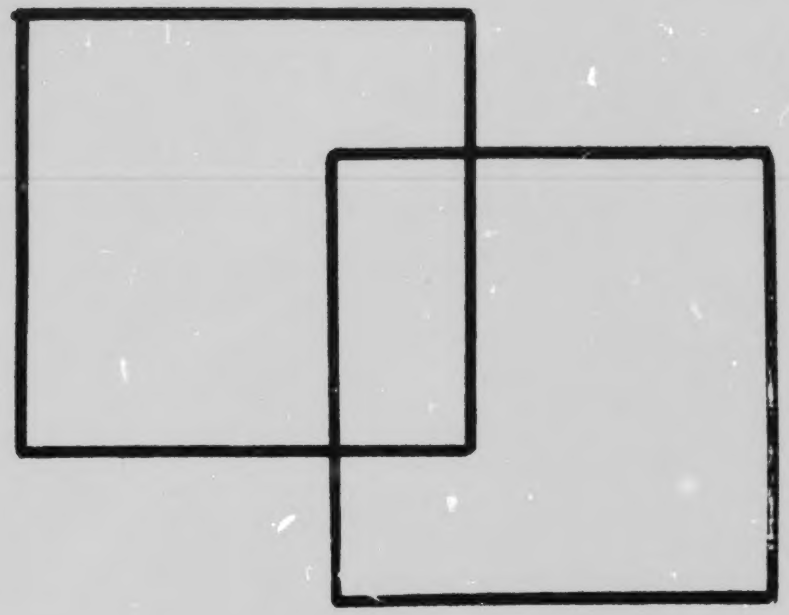
The child shown a card with patterns will be able to copy the figure from memory and gradually decrease the time it takes him to do it.

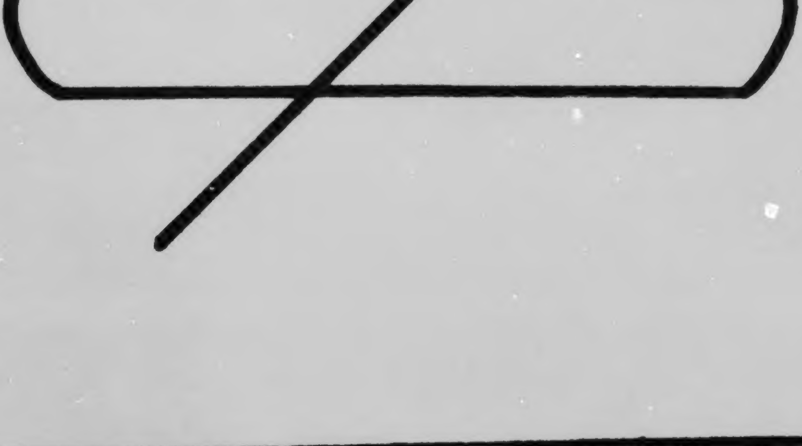


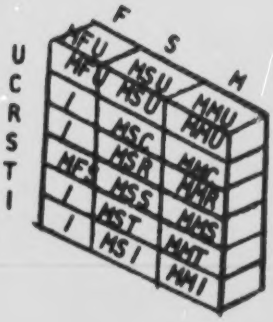


2.4.A









**Concept** Memory

**Curricular Objective**

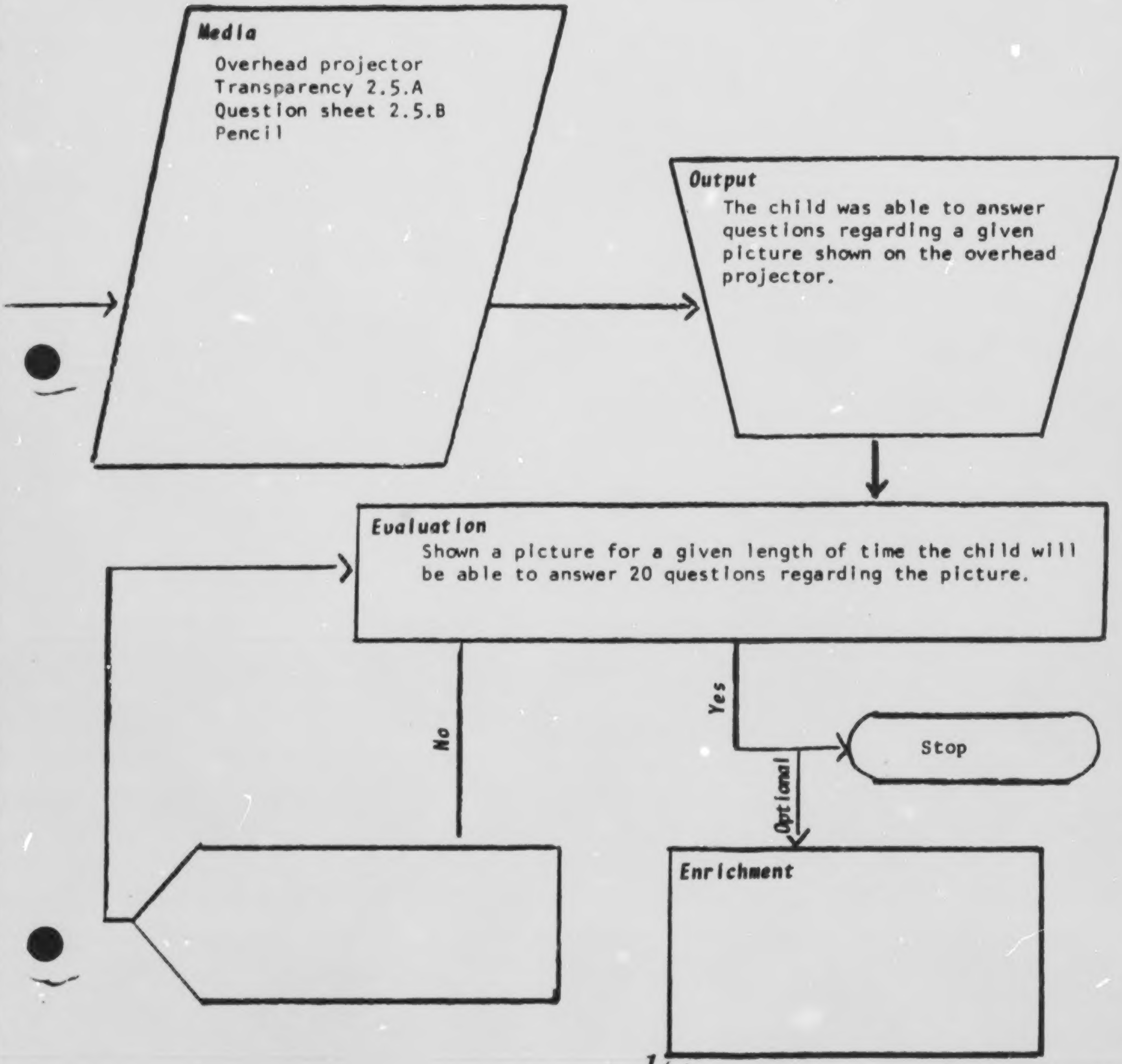
2.5 Shown a picture for a given length of time the child will be able to answer 20 questions regarding the picture.

**Input**

Review the advantages of a good memory.

**Learning Opportunities**

I: The teacher places the transparency (See 2.5.A) of a children's playground on the overhead projector.
  A: The children are to study the picture from 3-5 minutes.
  B: The overhead projector is then turned off and the children are to answer the set of dittoed questions (See 2.5.B) regarding the picture.
  C: The projector is turned back on to allow the children to correct their answers.



**Media**

Overhead projector
Transparency 2.5.A
Question sheet 2.5.B
Pencil

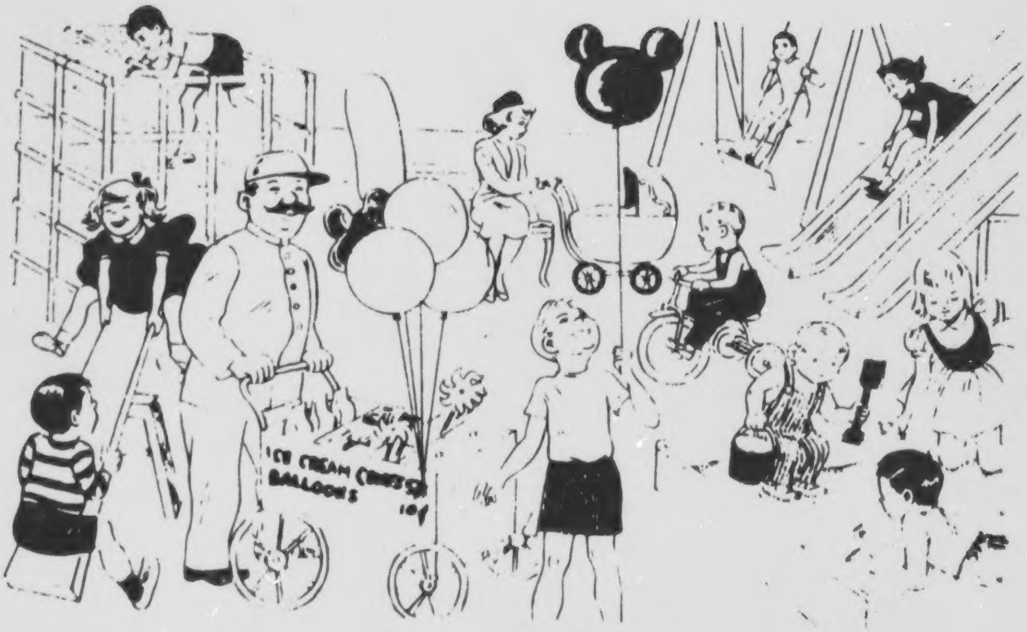
**Output**

The child was able to answer questions regarding a given picture shown on the overhead projector.

**Evaluation**

Shown a picture for a given length of time the child will be able to answer 20 questions regarding the picture.

**Enrichment**


ICE CREAM CONES 5¢
BALLOONS
10¢

From Doubleday Activity Book, Big Book of Pencil Games, ©1962
Doubleday and Co., Inc.

# QUESTIONS FOR MEMORY

1. Is anyone riding a tricycle? ______
2. Is anyone playing ball? ______
3. Did anyone buy a pinwheel? ______
4. How many baby carriages are there? ______
5. How many sliding chutes are there ______
6. Is there a policeman in the picture? ______
7. Did anyone reach the top of the jungle gym? ______
8. Is anyone using the seesaw? ______
9. Was there a boy or girl on the swing? ______
10. How many balloons did the ice cream man have? ______
11. How many children are playing in the sand pit? ______
12. Does the ice cream man have a moustache? ______
13. Is there a swing in the picture? ______
14. Did anyone buy a balloon? ______
15. How many benches are there? ______
16. How many ladies are there? ______
17. Does anyone have a pail and shovel? ______
18. Is the ice cream man driving a truck? ______
19. Is there a wading pool in the picture? ______
20. Is anyone running? ______

From Doubleday Activity Book, Big Book of Pencil Games, C 1962
Doubleday and Co., Inc.

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MSI
MMI

**Concept** Memory

**Curricular Objective**

2.6 The child will be able to reproduce accurately and for memory the right design from a study card when it is shown for a given length of time.

**Input**

Discuss memory reviewing what is needed by a person in order to retain things well.

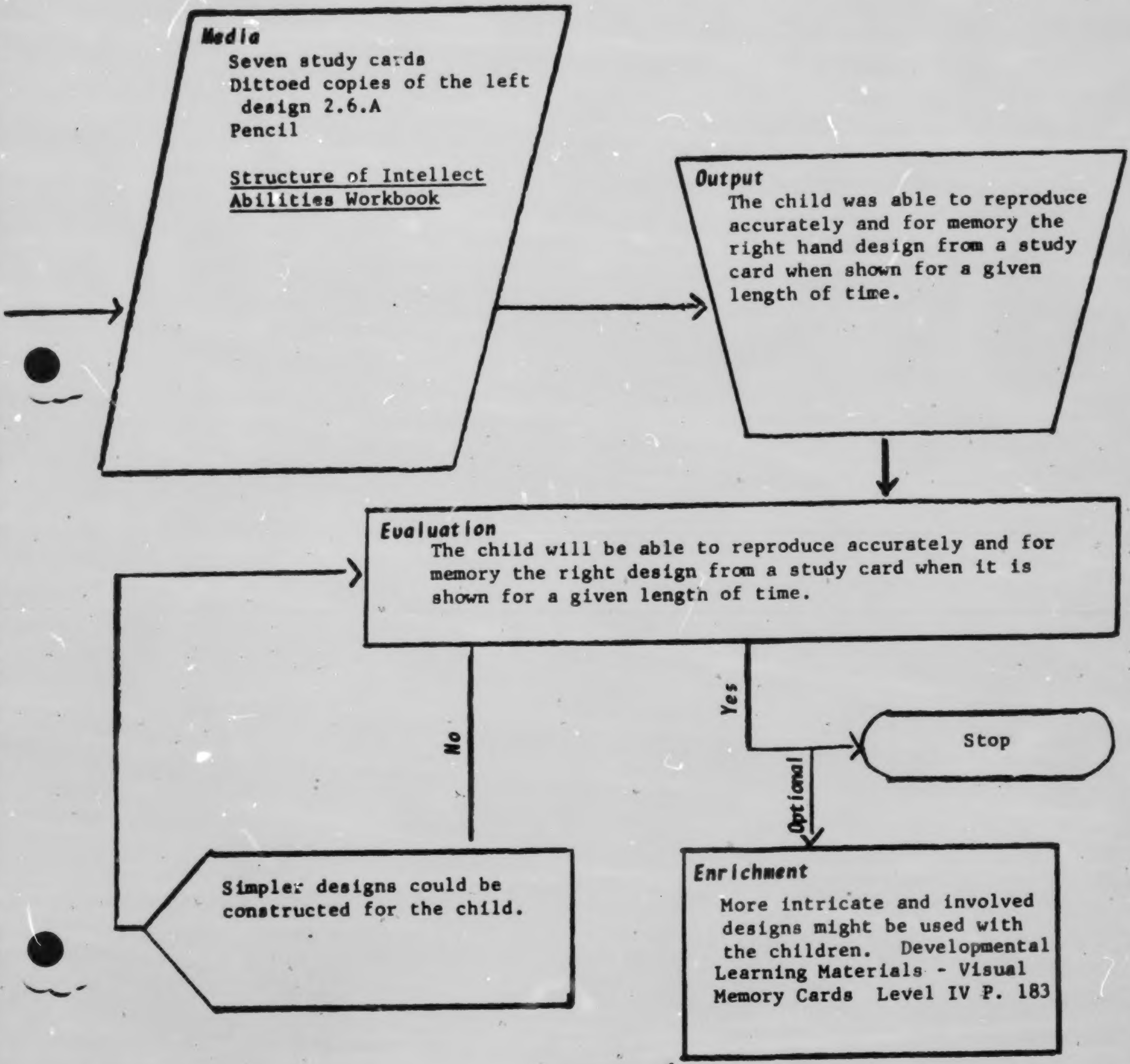
**Learning Opportunities**

I: The teacher distributes dittoed copies (See 2.6.A) which shows the left design on each study card.

II: The teacher holds up one study card (See 2.6.B) at a time for approximately 3-5 seconds (start with simplest first).

A: After the teacher has put the study card out of sight the children are asked to reproduce the design that was shown on the right side of the study.

B: When the ditto page is completed the teacher allows the children to check their designs by holding up the cards once again.



**Media**

Seven study cards

Dittoed copies of the left design 2.6.A

Pencil

Structure of Intellect Abilities Workbook

**Output**

The child was able to reproduce accurately and for memory the right hand design from a study card when shown for a given length of time.

**Evaluation**

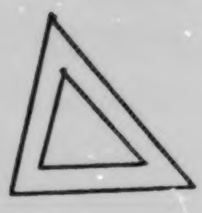
The child will be able to reproduce accurately and for memory the right design from a study card when it is shown for a given length of time.

Simpler designs could be constructed for the child.

**Enrichment**

More intricate and involved designs might be used with the children. Developmental Learning Materials - Visual Memory Cards Level IV P. 183

2.6.A



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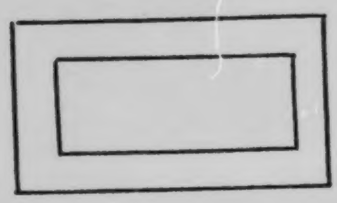

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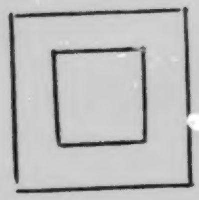

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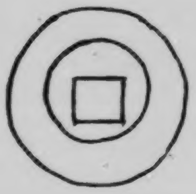

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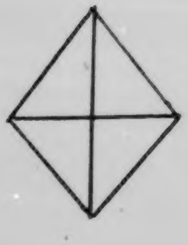

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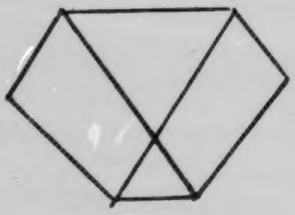

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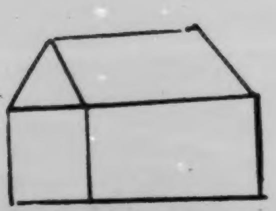

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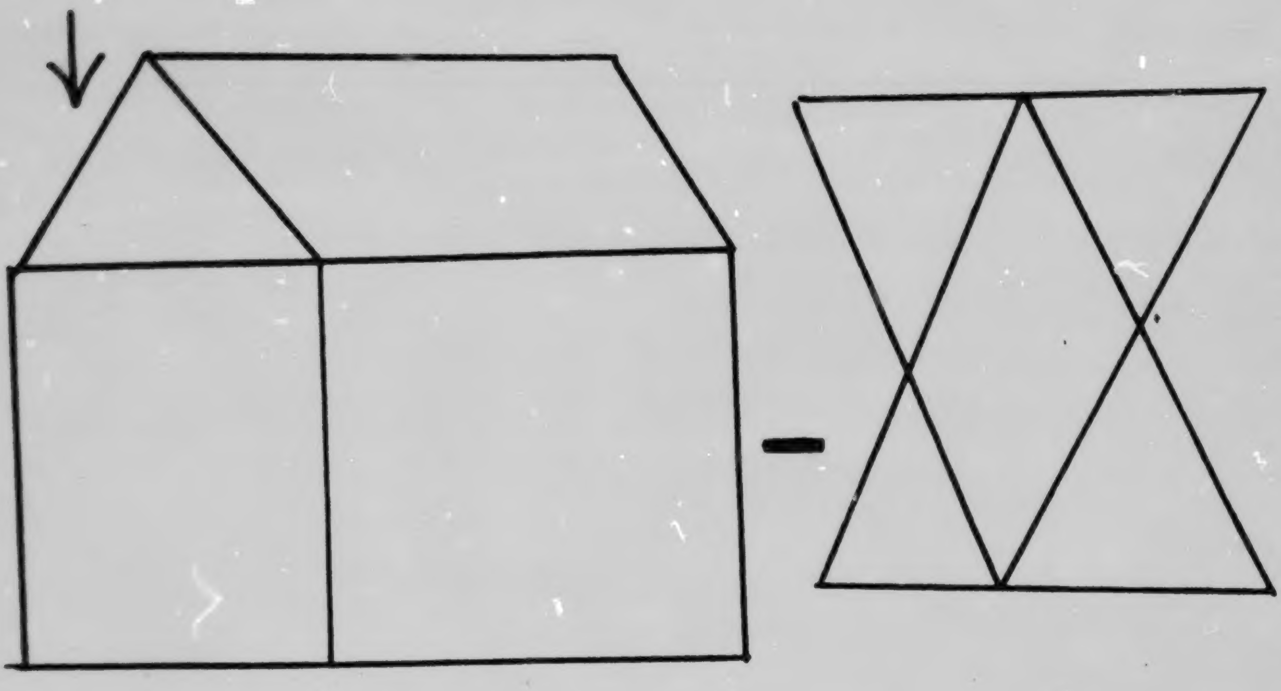

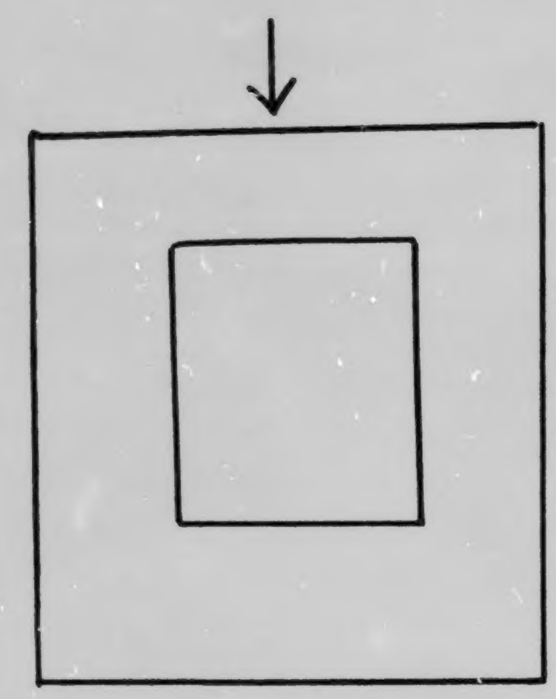

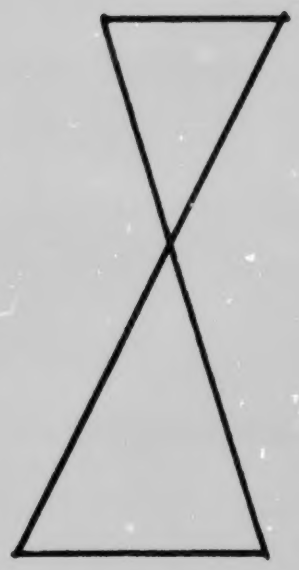

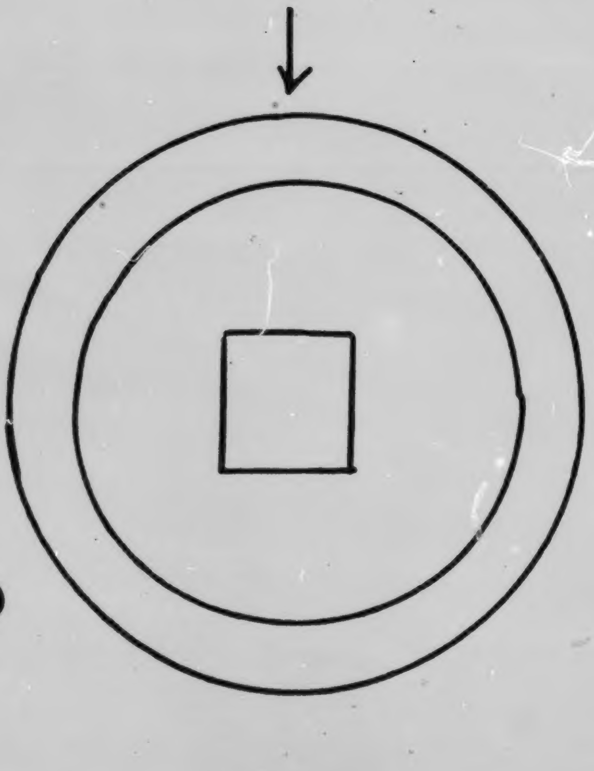

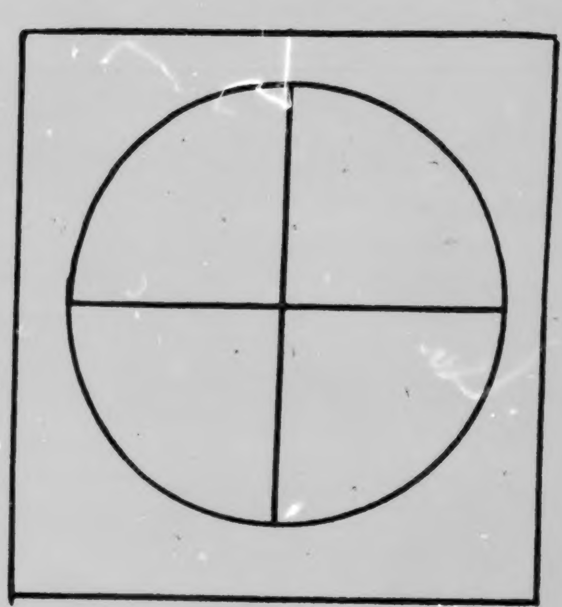

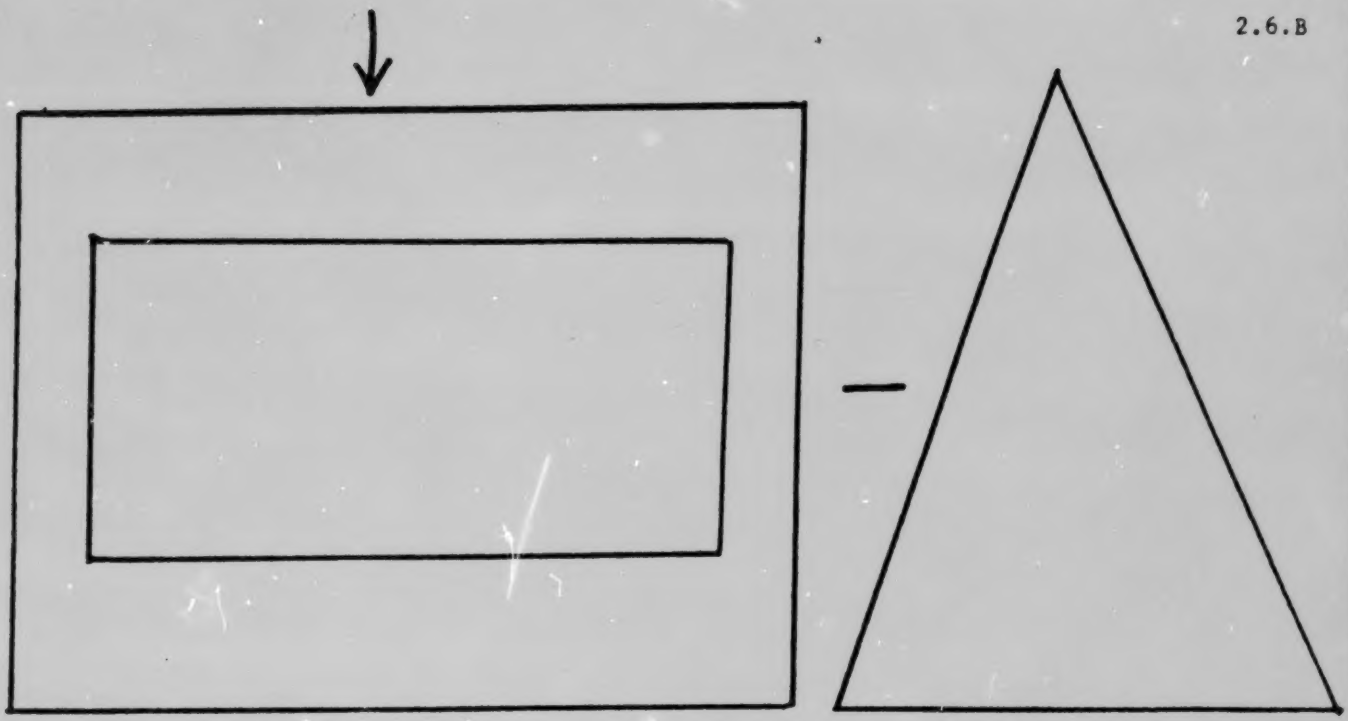

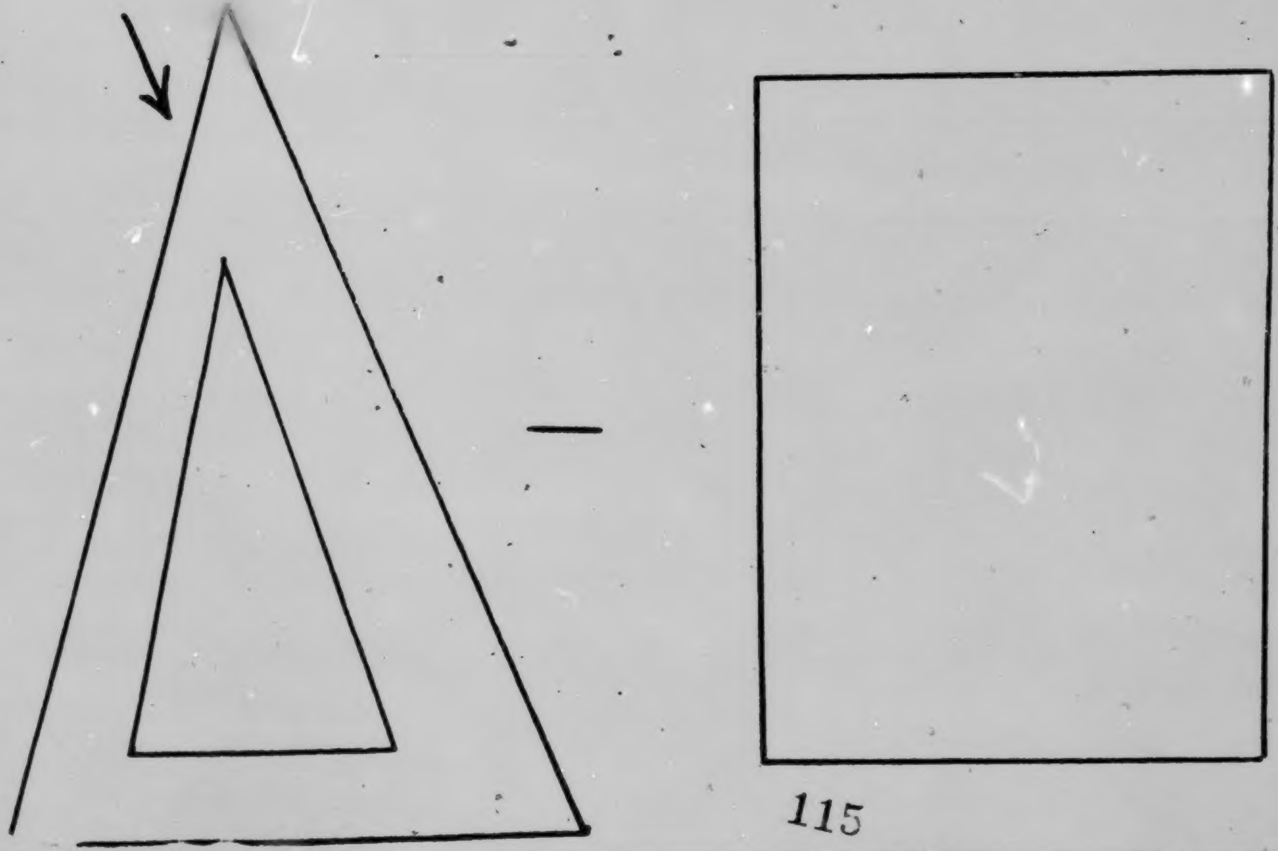

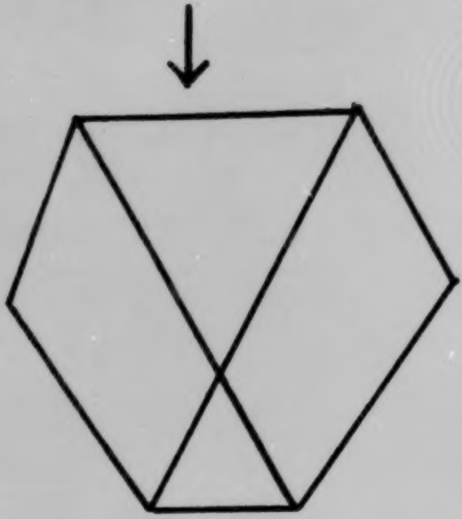

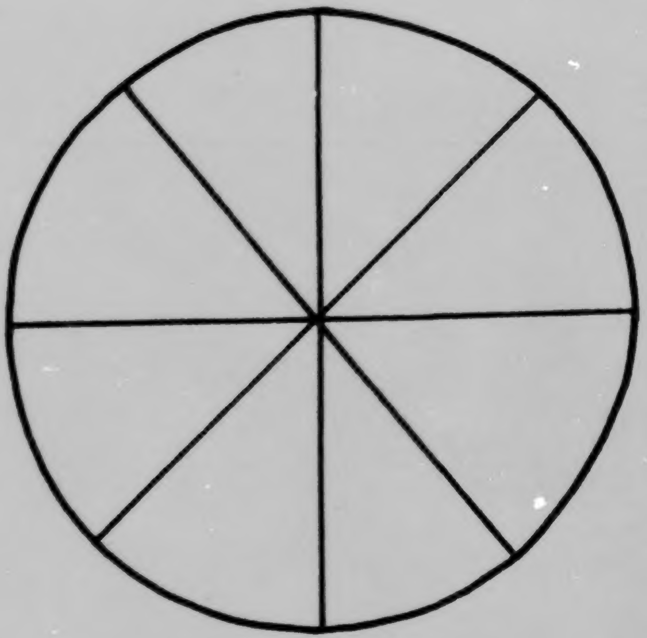

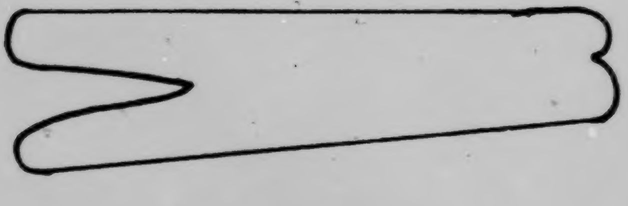

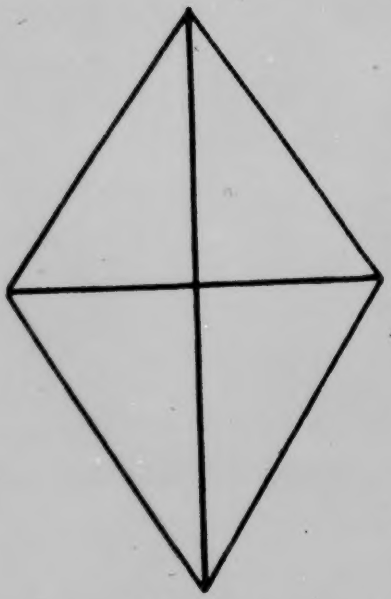

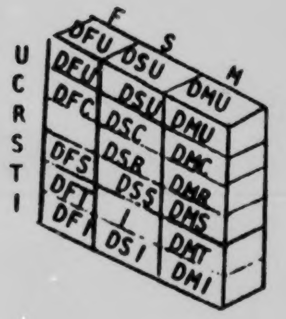
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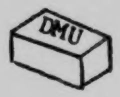
**Concept** Divergent Production

**Curricular Objective**

3.1.1 The children presented with a given idea will be able to brainstorm the idea and arrive at an unspecified number of answers.

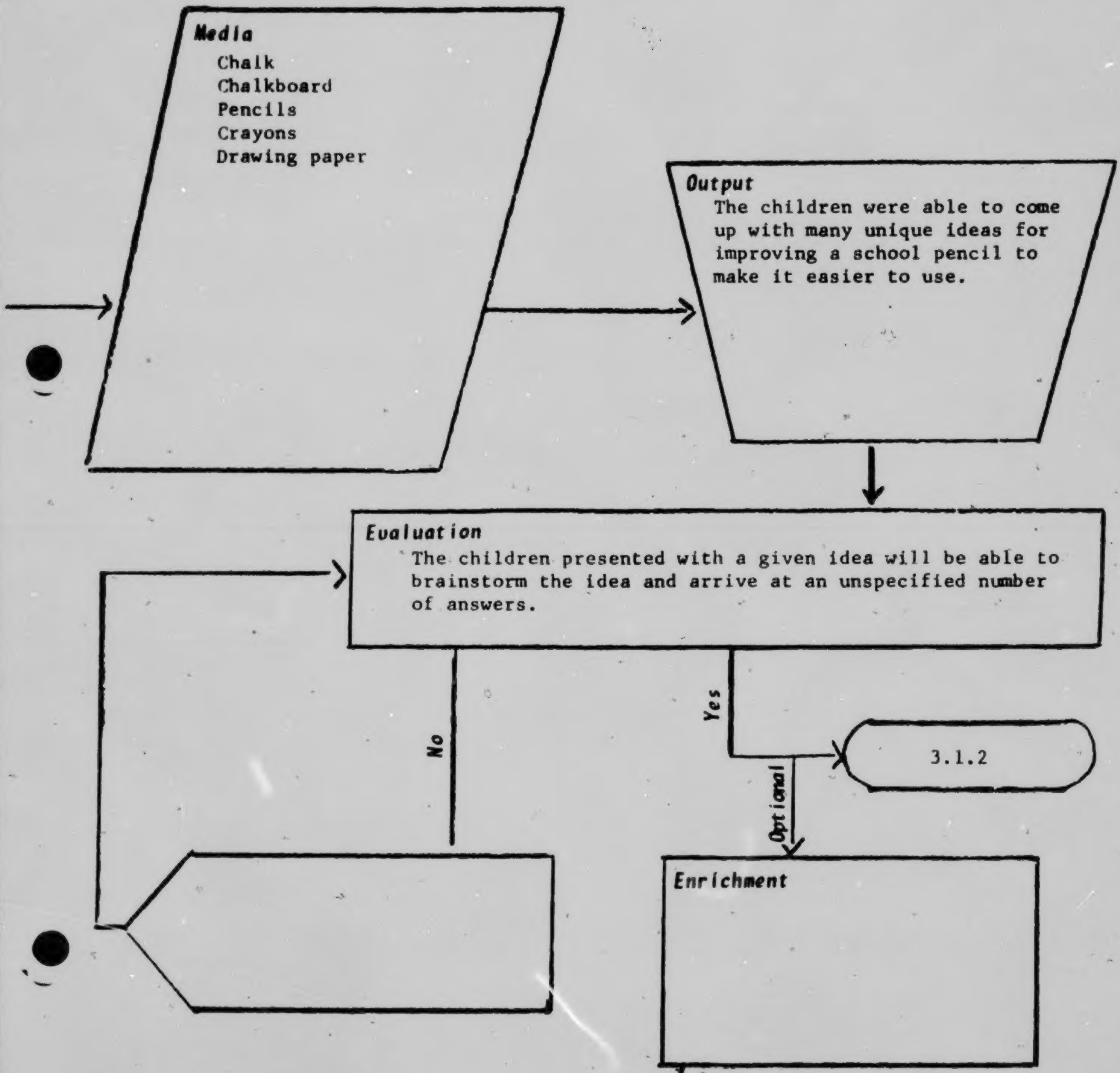


**Input**

Discuss the purpose of brainstorming (See 3.1.1.A) with the children.

**Learning Opportunities**

I: The teacher states the problem, eg: In what ways would you improve a school pencil to make it easier to use?
  - A: State the rules.
  - B: Restate the problem and proceed to write the ideas of the children on the chalkboard for about 15 minutes.
  - C: Evaluate the responses.
  - D: Child develops any one of the ideas on his own.



**Media**

- Chalk
- Chalkboard
- Pencils
- Crayons
- Drawing paper

**Output**

The children were able to come up with many unique ideas for improving a school pencil to make it easier to use.

**Evaluation**

The children presented with a given idea will be able to brainstorm the idea and arrive at an unspecified number of answers.

# WHAT EVERYONE SHOULD KNOW ABOUT BRAINSTORMING BUT WAS TOO BUSY TO ASK

I. Purposes of Brainstorming
  A. To create a great number of ideas which leads to more quality in those ideas.
  B. To open people up to sharing ideas without fear of criticism.
  C. To enable members of the group to build on each others' ideas.

II. Procedure
  A. The leader states a definite problem.
    1. Make it specific and simple.
    2. Examples:
      a. Name everything you can think of that is soft, white, and edible.
      b. What other uses can you think of for a TV tray?
      c. In what ways would you improve a school pencil to make it easier to use?

  B. State the rules for brainstorming.
    1. No criticism - all ideas are accepted.
    2. Make your ideas free wheeling - as way out as you want to make them.
    3. Build on the ideas of others - someone may give you an idea you can elaborate upon.

  C. Restate the problem and as the children give their ideas list them on the board with No comment.

  D. After 15 to 20 minutes stop the brainstorming.
    1. Comment on the amount and variety of responses.

  E. Evaluate each idea by using standards you have set up, such as:
    1. Does it actually solve the problem - or does it create new ones? (Does it build or help society?)
    2. Is it possible to use it either now or in the near future? (Is it practical?)
    3. Are human beings really able to handle it? (Is it compatible with human beings?)

  F. Leave the ideas on the blackboard that the children decide fit the criteria.

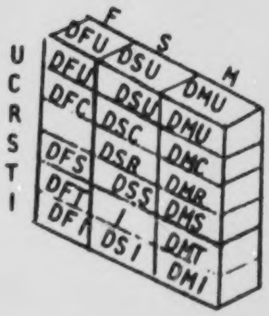
III. After brainstorming, you may discuss feelings and how the ideas came about.

IV. Then each child may take any idea and develop it on his own by:
  A. Making a labeled diagram or design of the idea or object.

  B. Making a model of the idea.

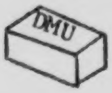
  C. Writing an explanation of his application of the idea.

  D. Creating an "Invention" of his own by combining the ideas from the board.



**Concept** Divergent Production

**Curricular Objective**
3.1.2 The child will produce many ideas for the use of an umbrella.

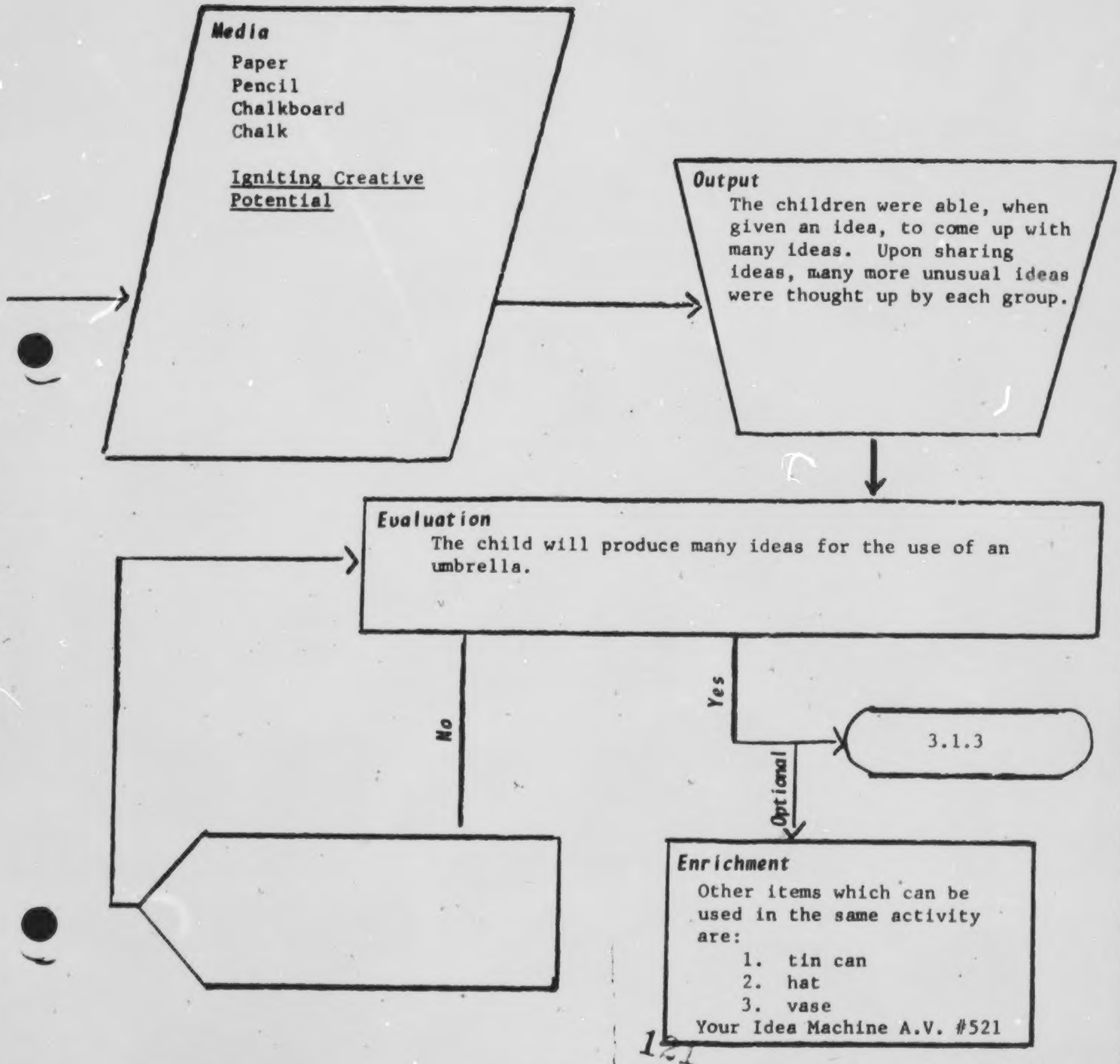


**Input**
Discuss the term "fluency" with the class.

**Learning Opportunities**

I: Teacher divides the class in four to six teams.
   A: All teams are to think of as many uses as they can for an umbrella and list these ideas.

II: At the end of five minutes the teacher stops the class and records ideas from the teams on the chalkboard.
   A: Having shared their lists, children are instructed to go back into their groups and add to their lists something no one else has thought of.
   B: After about five minutes have groups read lists.
   C: Have children listen for the differences and likenesses in this list as compared to the first one.



**Media**

Paper
Pencil
Chalkboard
Chalk

Igniting Creative Potential

**Output**

The children were able, when given an idea, to come up with many ideas. Upon sharing ideas, many more unusual ideas were thought up by each group.

**Evaluation**

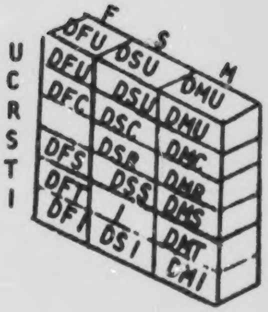
The child will produce many ideas for the use of an umbrella.

**Enrichment**

Other items which can be used in the same activity are:

1. tin can
2. hat
3. vase

Your Idea Machine A.V. #521



**Concept** Divergent Production

**Curricular Objective**

3.1.3 The child presented with a given word will be able to produce many words by changing the consonants of the given word.

**Input**

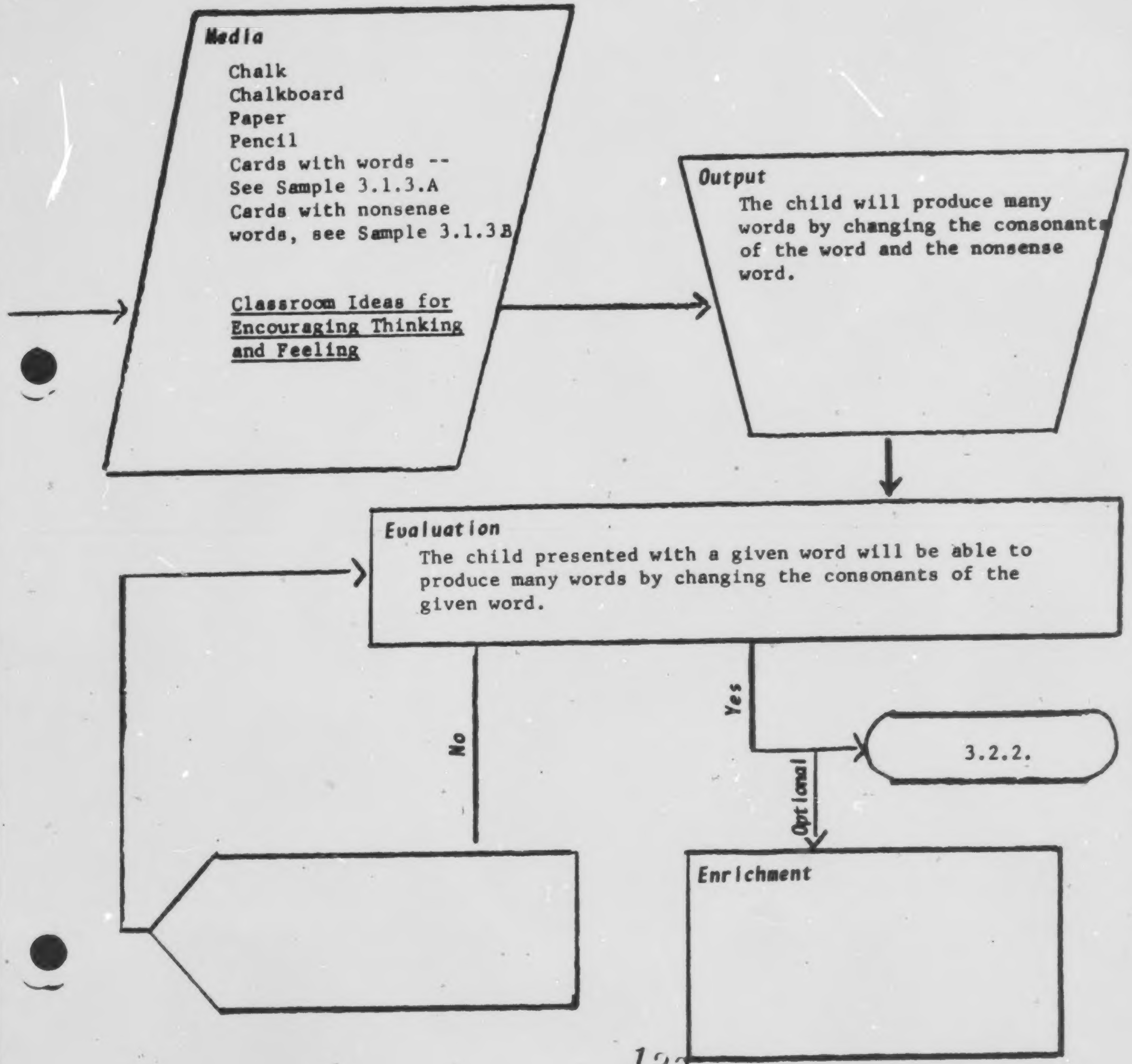
Discuss rhyming words and words that begin alike. Talk about how your mind can think of many words.

**Learning Opportunities**

I: The teacher writes the word "make" on the blackboard and the children are to respond orally with as many words as they can that contain these vowels in the same order, but with different consonants.

A: The teacher hands each child a card on which is written a simple word. (See 3.1.3.A) The children list on a piece of paper as many words as they can which contain the vowels in the same order, but with different consonants.

B: Another card containing a nonsense word is handed the child. (See 3.1.3.B) Here again the child is to take away the consonants and make up real words containing the vowels.



**Media**

Chalk
Chalkboard
Paper
Pencil
Cards with words --
See Sample 3.1.3.A
Cards with nonsense
words, see Sample 3.1.3B

Classroom Ideas for Encouraging Thinking and Feeling

**Output**

The child will produce many words by changing the consonants of the word and the nonsense word.

**Evaluation**

The child presented with a given word will be able to produce many words by changing the consonants of the given word.

**Enrichment**

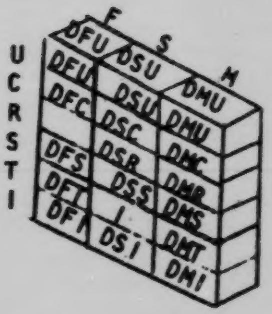
# WORDS FOR CARDS

| | |
|---|---|
| table | crayon |
| used | button |
| hole | tiger |
| frame | rope |
| poke | tale |
| cute | rice |
| paper | waste |
| bike | |

3.1.3.B

# NONSENSE WORDS

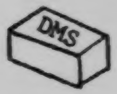
| | |
|---|---|
| wedo | zemo |
| goze | turzen |
| vofe | jabe |
| qidden | kace |
| gare | wectob |
| yume | cime |
| fijke | hoje |
| binnen | |



**Concept** Divergent Production

**Curricular Objective**

3.1.4 The child will be able to recognize the word that will finish a given simile and will then interpret as many of the similes as possible by writing story paragraphs about them.



**Input**

Discuss similes as a figure of speech which compares two dissimilar things by using the words "like" or "as".

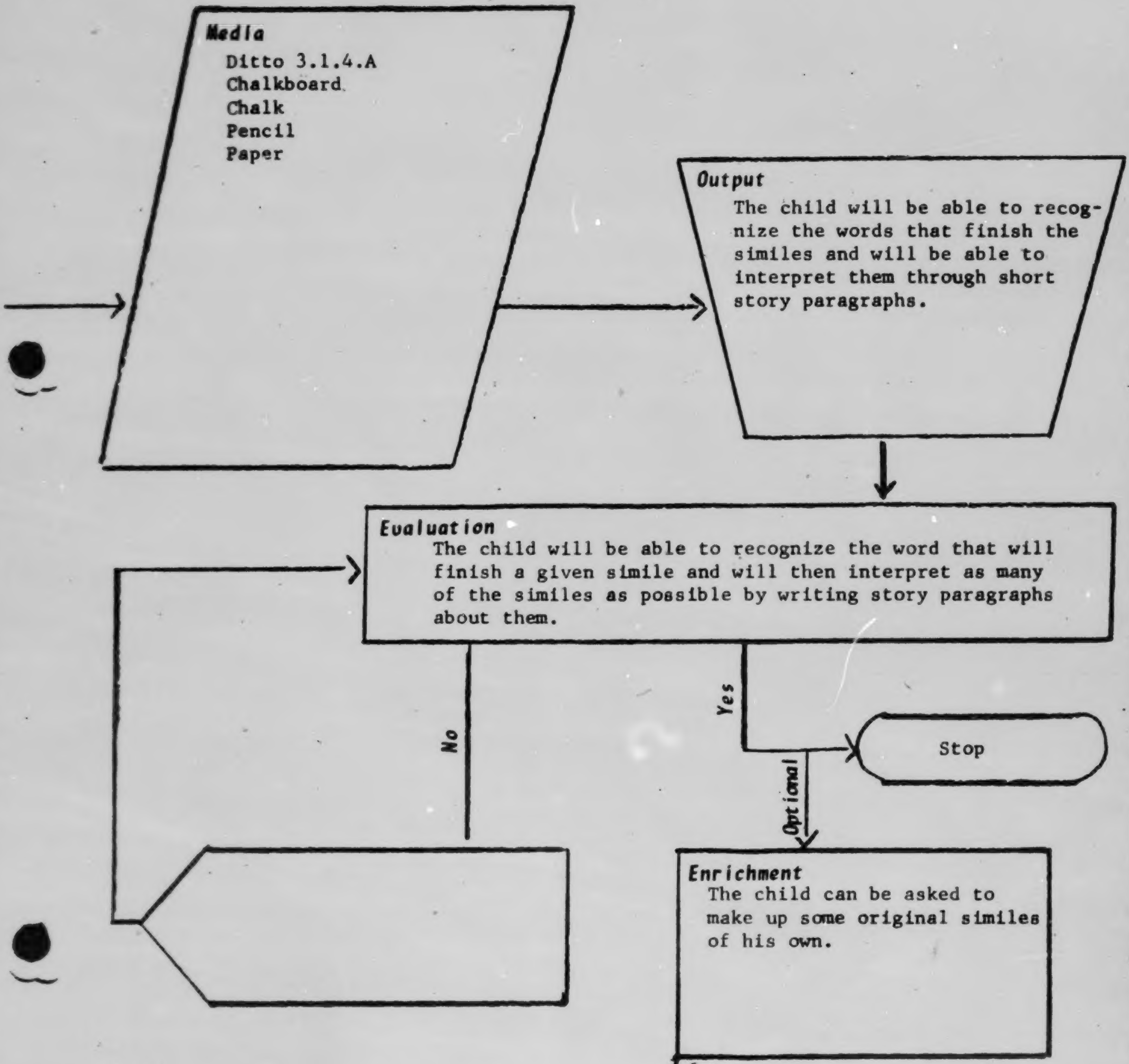
Give examples on board.

**Learning Opportunities**

I: The teacher distributes a ditto of ten unfinished similes to the class. (See 3.1.4.A)

A: The children are asked to find the word at the bottom of the paper which best finishes the simile.

II: The teacher then asks the children to interpret the similes by writing a short story paragraph on as many similes from the paper that he can.



**Media**

Ditto 3.1.4.A
Chalkboard
Chalk
Pencil
Paper

**Output**

The child will be able to recognize the words that finish the similes and will be able to interpret them through short story paragraphs.

**Evaluation**

The child will be able to recognize the word that will finish a given simile and will then interpret as many of the similes as possible by writing story paragraphs about them.

**Enrichment**

The child can be asked to make up some original similes of his own.

3.1.4.A

## SIMILES

1. **Busy as a** ______________________________

2. **Quick as a** ______________________________

3. **Green as** ______________________________

4. **Strong as an** ______________________________

5. **Soft as a** ______________________________

6. **Hungry as a** ______________________________

7. **Tall as a** ______________________________

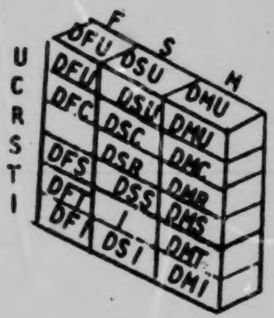
8. **Fat as a** ______________________________

9. **Skinny as a** ______________________________

10. **Quiet as a** ______________________________

mouse
fox
ox
beaver
grass

feather
bear
pig
rail
house



***Concept*** Divergent Production

***Curricular Objective***

3.1.5 The child will be able to brainstorm and arrive at an unspecified number of answers for improving a school chair so that it is more comfortable to sit in.

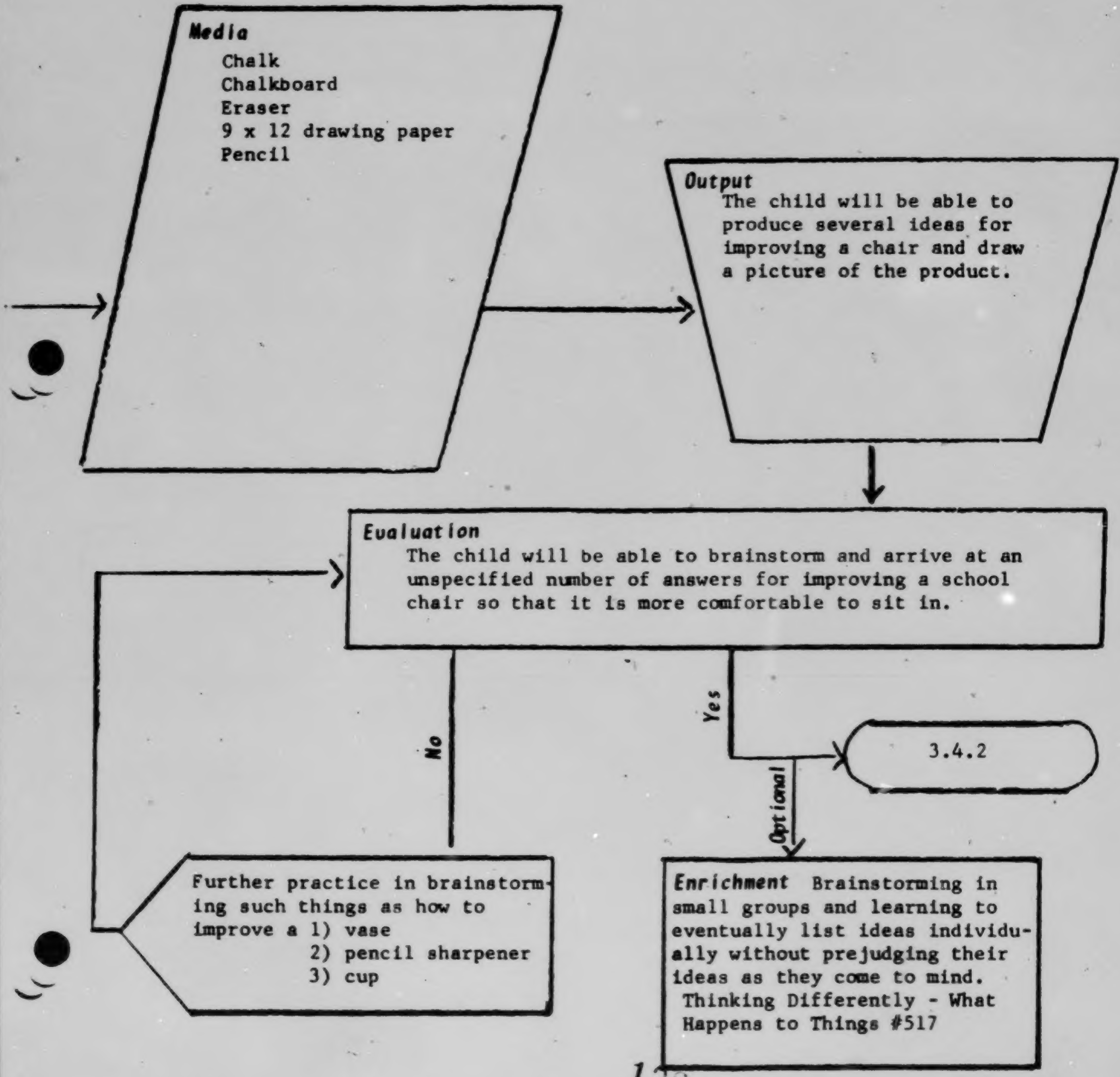
***Input***

Review the purpose of brainstorming (See 3.1.1.A) with the children.

Discuss the importance of the rules and the free wheeling of ideas before the time comes to evaluate them. In other words it is the flow of ideas which is important and don't discard an idea because you might think it is a foolish one.

***Learning Opportunities***

I: The teacher states the problem:
ie: In what ways would you improve a school chair to make it more comfortable to sit in.
- A: State the rules for brainstorming.
- B: Restate the problem and proceed to write the ideas of the children on the chalkboard for about 10-15 minutes.
- C: Evaluate the responses.
- D: The child may design any one of the ideas on 9 x 12 drawing paper.



**Media**

- Chalk
- Chalkboard
- Eraser
- 9 x 12 drawing paper
- Pencil

**Output**
The child will be able to produce several ideas for improving a chair and draw a picture of the product.

**Evaluation**
The child will be able to brainstorm and arrive at an unspecified number of answers for improving a school chair so that it is more comfortable to sit in.

Further practice in brainstorming such things as how to improve a 1) vase
2) pencil sharpener
3) cup

**Enrichment** Brainstorming in small groups and learning to eventually list ideas individually without prejudging their ideas as they come to mind.
Thinking Differently - What Happens to Things #517

F
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DFU
DSU
DMU
DFC
DSC
DMC
DFS
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DMR
DFT
DSS
DMS
DFI
DSI
DMT
DMI

**Concept** Divergent Production

**Curricular Objective**

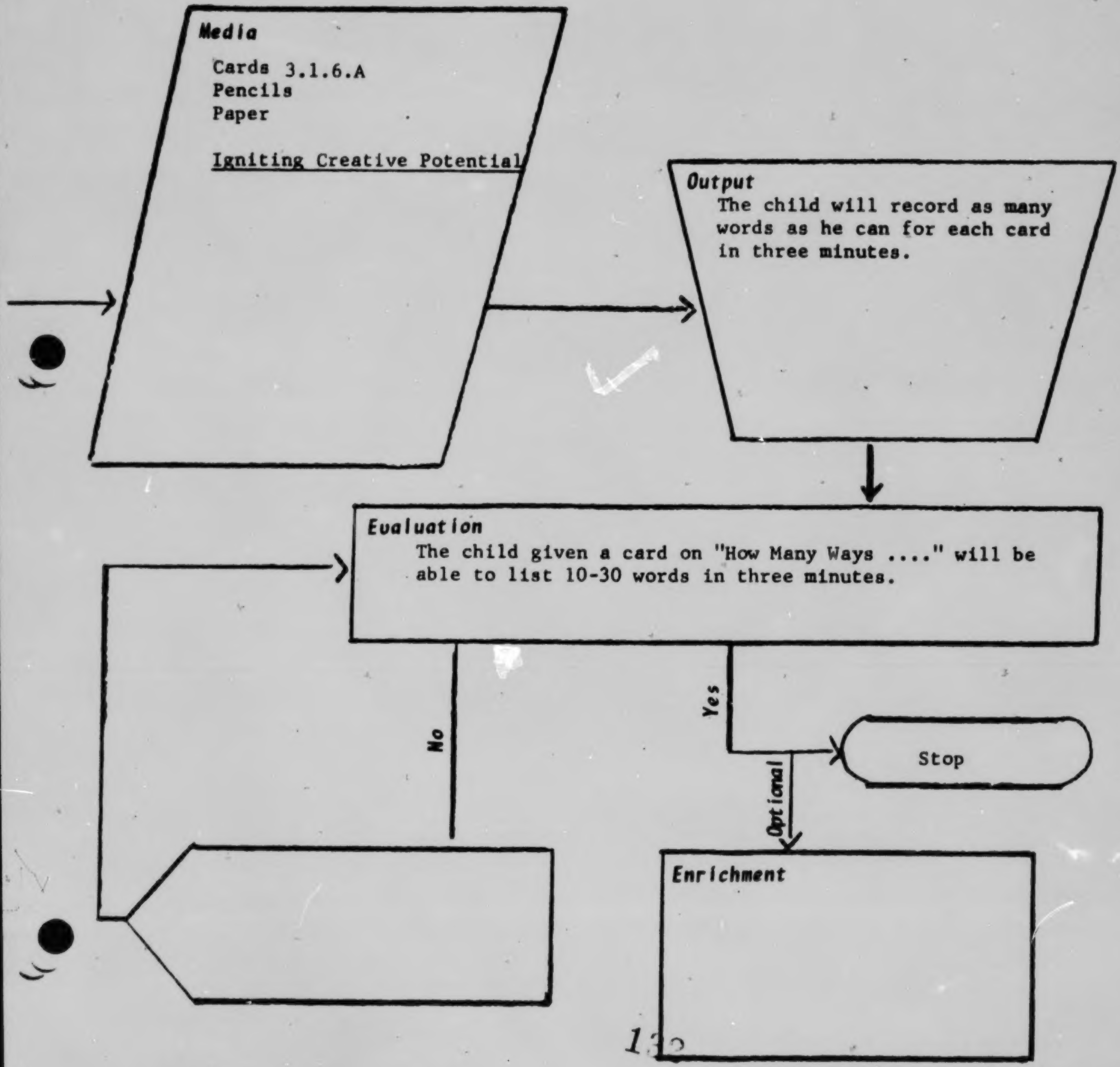
3.1.6 The child given a card on "How Many Ways...." will be able to list 10-30 words in three minutes.

**Input**

Discuss the importance of becoming more fluent in the use of words.

**Learning Opportunities**

- I: The teacher hands each child a card with a sentence "How many ways can ......" (3.1.6.A)
  - A: Children record in three minutes on paper as many words as they can think of that relate to the sentence.
  - B: Cards are passed to the right at the end of three minutes to start a new card.
  - C: The cards are passed three to four times.
  - D: Lists are read by those who wish to do so.



Media

Cards 3.1.6.A
Pencils
Paper

Igniting Creative Potential

Output

The child will record as many words as he can for each card in three minutes.

Evaluation

The child given a card on "How Many Ways ...." will be able to list 10-30 words in three minutes.

No
Yes
Stop
Optional
Enrichment

How many ways can sandpaper feel?

How many ways can a haunted house look?

How many ways can a camel move?

How many ways can a scream sound?

How many ways can an ice cream sundae taste?

How many ways can a fish swim?

How many ways can a tree look?

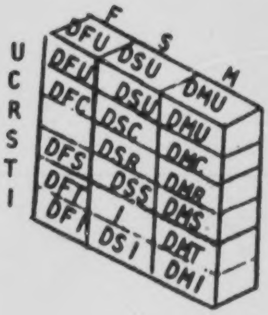
How many ways can a castle look?

How many ways can a lion roar?

How many ways can an apple look?

How many ways can a sunny day feel?

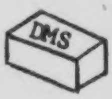
How many ways can a person speak?



**Concept** Divergent Production

**Curricular Objective**

3.2.1 The child presented with a given idea will be able to produce many different ideas and make appropriate use of them in cinquain poetry.



**Input**

Discuss the construction of cinquain poetry. A topic should be given the child and he should be allowed to create some cinquains of his own before the activity actually begins.

**Learning Opportunities**

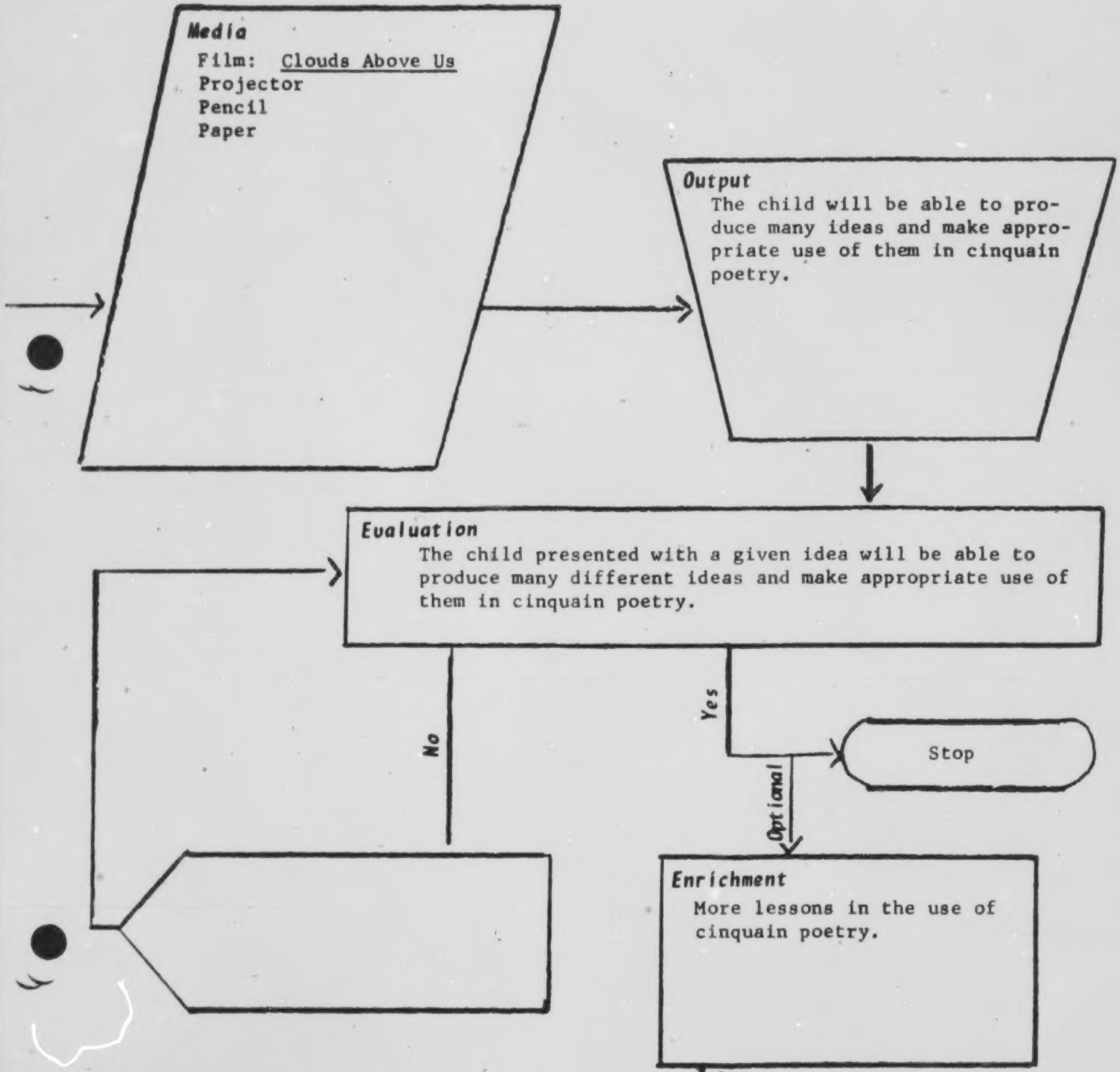
I: The teacher shows the film Clouds Above Us.

A: The projector is turned to silent so the children may view the pictures without sound.

B: The film is turned off as soon as the word "nimbus" disappears from the screen.

II: The teacher instructs the children to list as many words as they possibly can think of in ten minutes that pertain to clouds.

III: Using the lists the teacher requests the child to write some of the words into Cinquain Poetry.



**Media**

Film: Clouds Above Us
Projector
Pencil
Paper

**Output**

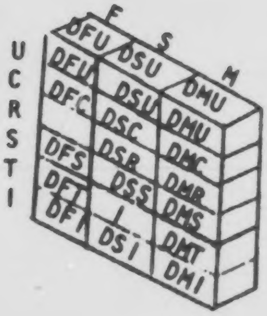
The child will be able to produce many ideas and make appropriate use of them in cinquain poetry.

**Evaluation**

The child presented with a given idea will be able to produce many different ideas and make appropriate use of them in cinquain poetry.

**Enrichment**

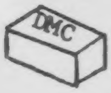
More lessons in the use of cinquain poetry.



**Concept** Divergent Production

**Curricular Objective**

3.2.2 The child will produce many ideas for uses of a toothpick and will be able to group these ideas into many different categories.



**Input**

Present a lesson in grouping (Categorizing) to the class. (See 3.2.2.A) Permit children to group cut figures into as many categories as they possibly can.

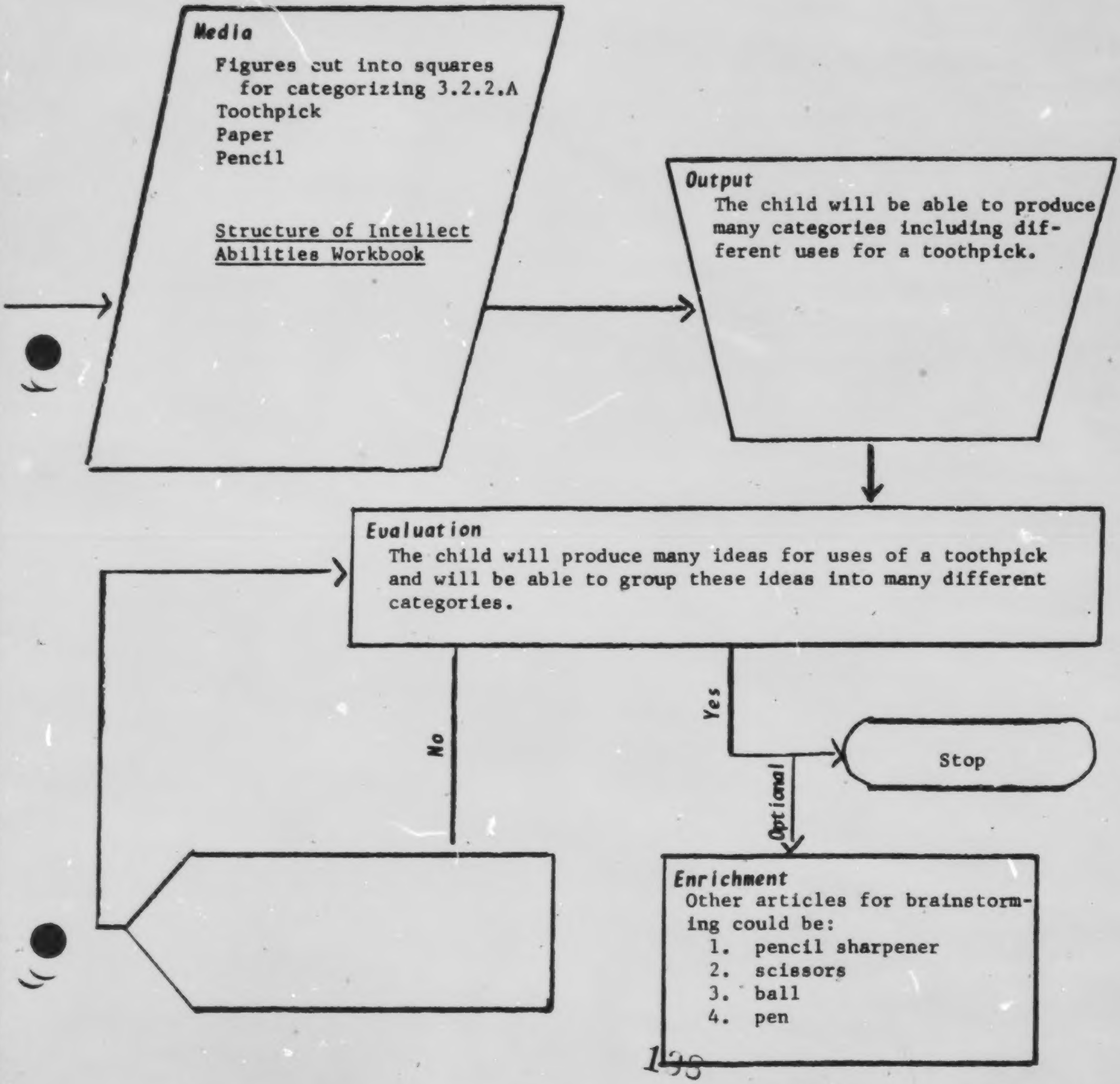
Discuss the meaning of flexibility with the class.

**Learning Opportunities**

I: The teacher shows the children a toothpick.
  A: Instruct the children to think of as many unusual uses as they can for a toothpick.
  B: Give children 10 minutes to list their uses on paper.

II: The teacher then asks the children to evaluate their list according to the brainstorming evaluation standards. (Refer back to 3.1.1.A point E)

III: Following the evaluation of their lists the teacher instructs the children to group the list into as many categories as they can possibly find.



***Media***

Figures cut into squares
for categorizing 3.2.2.A
Toothpick
Paper
Pencil

Structure of Intellect Abilities Workbook

***Output***

The child will be able to produce many categories including different uses for a toothpick.

***Evaluation***

The child will produce many ideas for uses of a toothpick and will be able to group these ideas into many different categories.

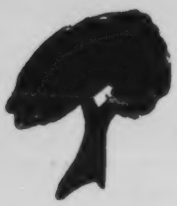
***Enrichment***

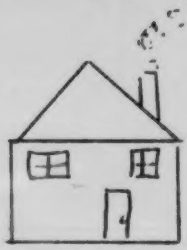
Other articles for brainstorming could be:

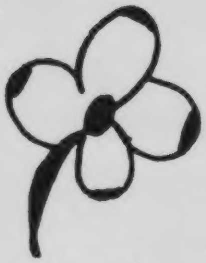
1. pencil sharpener
2. scissors
3. ball
4. pen

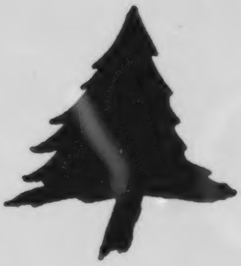
3.2.2.A

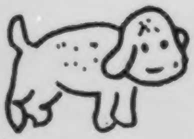
Group and regroup these figures:

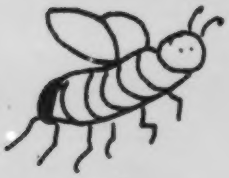


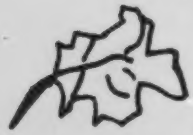


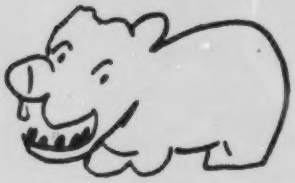


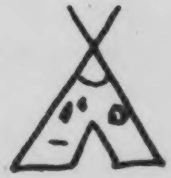


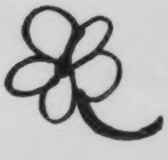












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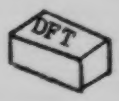
**Concept** Divergent Production

**Curricular Objective**

3.2.3 The child will be able to develop many creative pictures from given squiggles and will give them clever and unusual titles.



**Input**

Discuss with the children what a squiggle is and how a picture can be created from one.

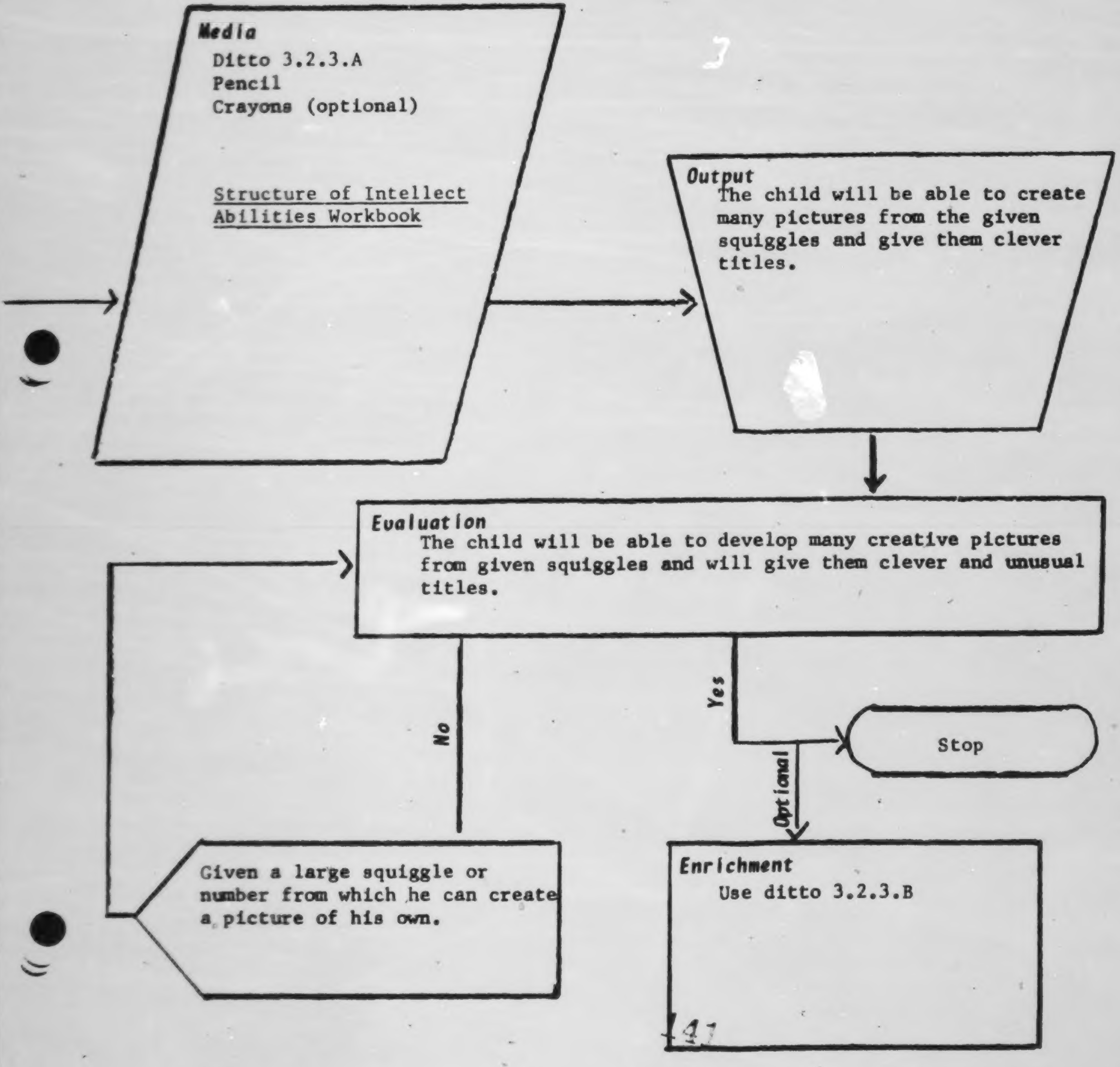
The teacher might draw a squiggle on the board and let a child come up to make a picture of it.

Discuss the fact that titles should tell something about the picture and that clever and unusual titles will draw more attention to it.

**Learning Opportunities**

I: The teacher distributes copies of ditto (See 3.2.3.A) and asks the children to draw an original picture from each squiggle.

II: The teacher also asks the child to give each picture they create from the squiggle the most creative and unusual title they can think of.



**Media**

Ditto 3.2.3.A
Pencil
Crayons (optional)

Structure of Intellect Abilities Workbook

**Output**

The child will be able to create many pictures from the given squiggles and give them clever titles.

**Evaluation**

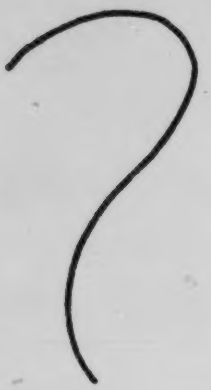
The child will be able to develop many creative pictures from given squiggles and will give them clever and unusual titles.

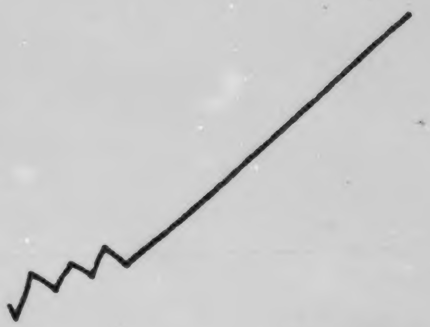
Given a large squiggle or number from which he can create a picture of his own.

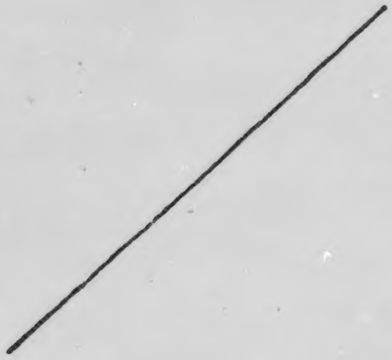
**Enrichment**

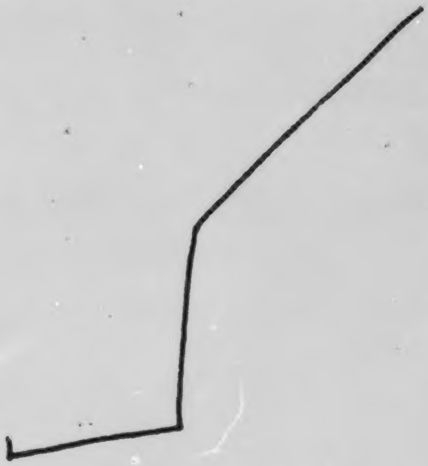
Use ditto 3.2.3.B

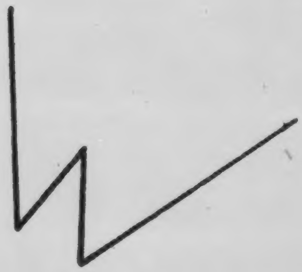
3.2.3.A





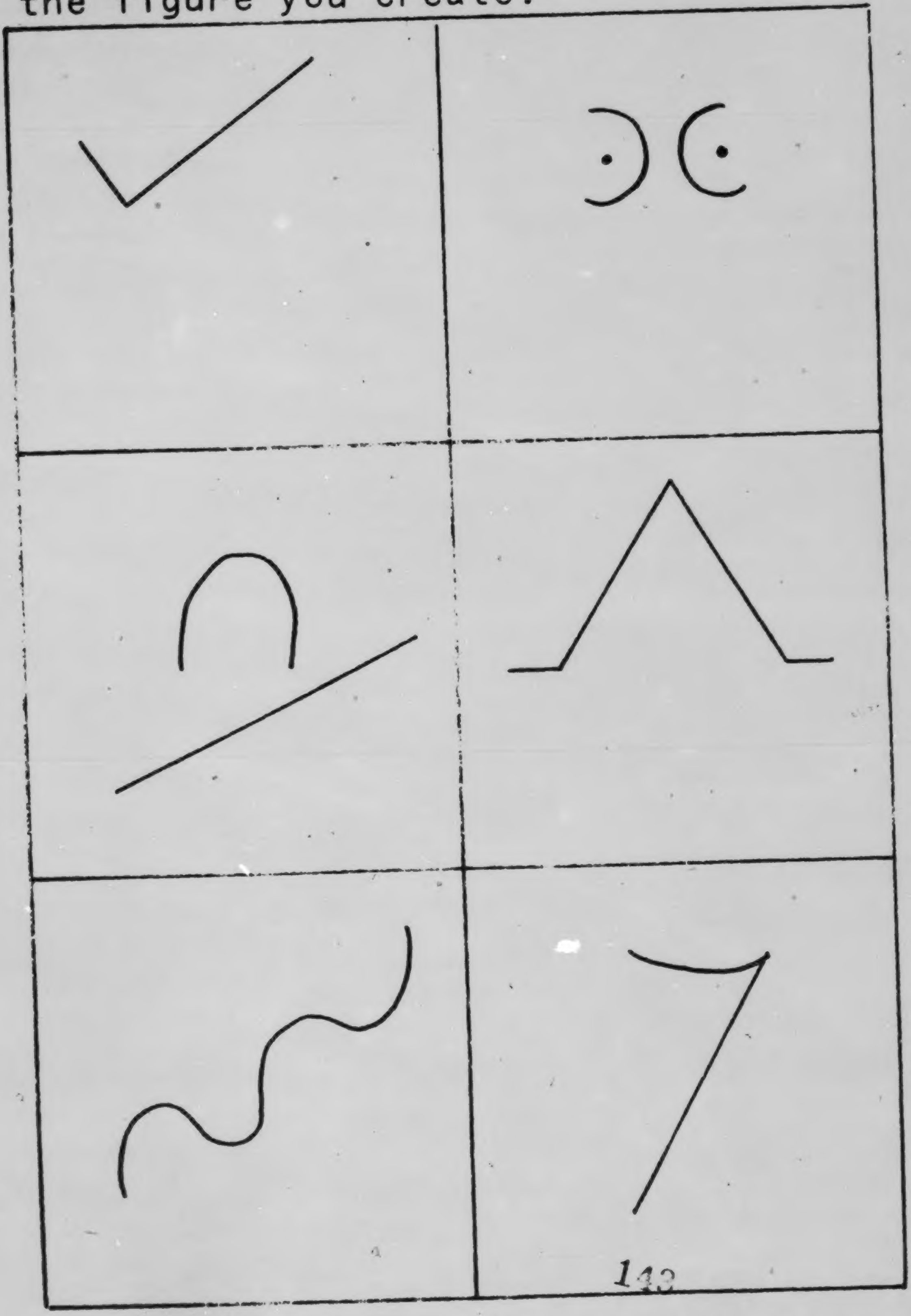


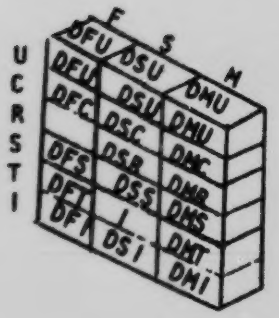




3.2.3.B

Elaborate upon the given marks in such a way that your work will result in something most people will recognize. The given marks must be included as part of the figure you create.

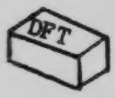




**Concept** Divergent Production

**Curricular Objective**

3.2.4 Given the question "How many ways can you express a dandelion?" the child will be able to create or draw many different ways he sees or has seen a dandelion.



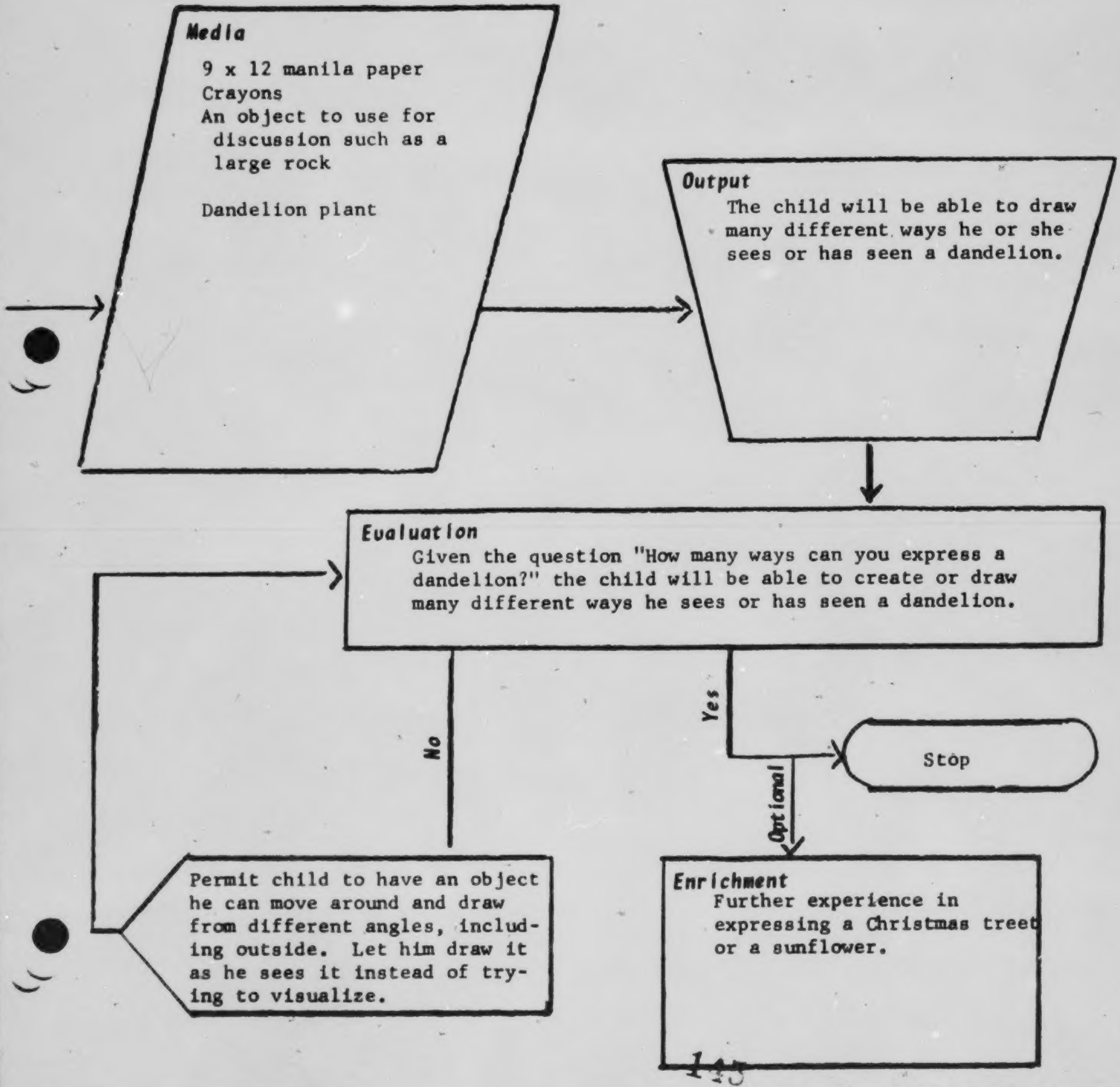
**Input**

Discuss flexibility. The teacher should help the child understand when one looks at things they see them many different ways. Hold an object up before the class. Discuss the many ways they see the object from where they are sitting, as they pass by it, stand over it, go behind it, as they see it from another side etc.

Further the discussion by asking "If it were a living thing growing in the ground, how might it look when it is exposed to all kinds of weather or stages of growth.

**Learning Opportunities**

I: The teacher distributes a piece of 9 x 12 manila paper to each child.
- A: Show the class a dandelion plant.
- B: Ask the question, "How many ways can you express a dandelion?'
- C: The child should be allowed to draw as many different ways he or she can think of or visualize a dandelion.



**Media**

9 x 12 manila paper
Crayons
An object to use for discussion such as a large rock

Dandelion plant

**Output**

The child will be able to draw many different ways he or she sees or has seen a dandelion.

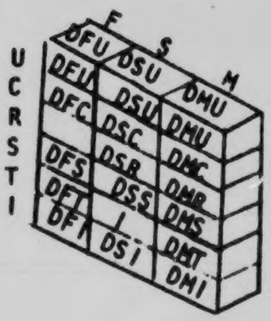
**Evaluation**

Given the question "How many ways can you express a dandelion?" the child will be able to create or draw many different ways he sees or has seen a dandelion.

Permit child to have an object he can move around and draw from different angles, including outside. Let him draw it as he sees it instead of trying to visualize.

**Enrichment**

Further experience in expressing a Christmas treet or a sunflower.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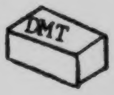
**Concept** Divergent Production

**Curricular Objective**

3.2.5 Given a nonsense story the child will be able to select words to replace those in the story which do not make sense so that the finished product will be a story which has meaning.



**Input**

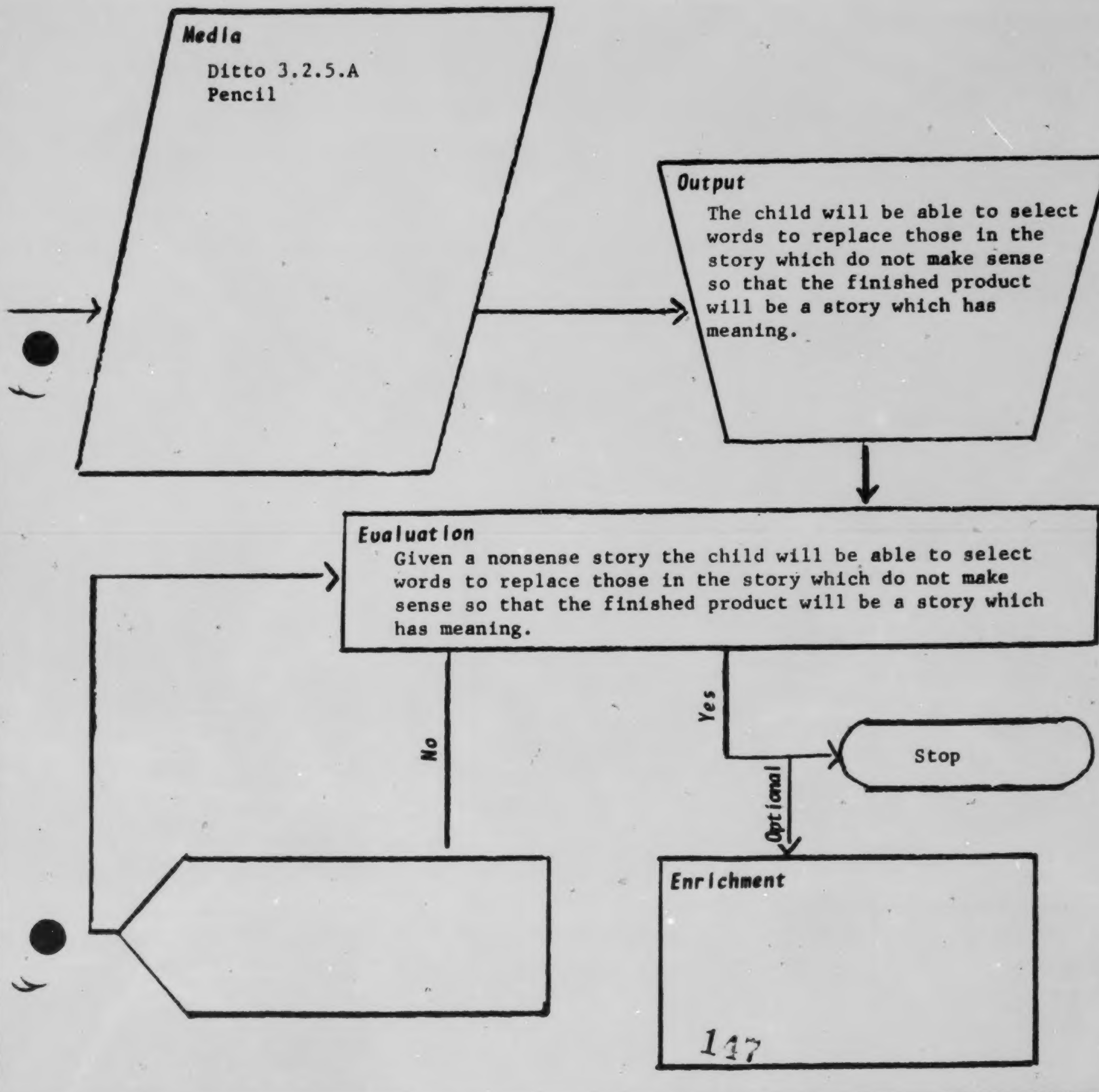
Discuss flexibility with the class. Bring out the fact that many times when writing a story we often substitute a word for another word in order that the story may make sense.

A nonsense story should be put on the board so that the class can make it into one which has meaning.

**Learning Opportunities**

I: The teacher distributes copies of ditto (see 3.2.5.A) to the class.

A: She asks the children to read the story and then rewrite it so that it will make sense.



**Media**

Ditto 3.2.5.A
Pencil

**Output**

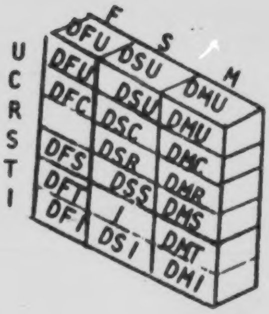
The child will be able to select words to replace those in the story which do not make sense so that the finished product will be a story which has meaning.

**Evaluation**

Given a nonsense story the child will be able to select words to replace those in the story which do not make sense so that the finished product will be a story which has meaning.

**Enrichment**

A big lion came into the desk and ate all the walls. He was so shiny he never had enough to think so airplanes kept away from him. He galloped through the table, flew up to the door and hit his beak on the wastebasket. He was so long he met his stem as he came through the other window. He liked to sleep through the rain, but other chickens wouldn't talk to him. His squeak was out in the dark and so many people would not travel with him. He left the carpet and decided to go back to the bank and leave as he came in through the lamp. He was often in the chair but took good care of his ear.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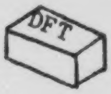
**Concept** Divergent Production

**Curricular Objective**

3.3.1 Given a paper sack the child will create an original use for the sack.

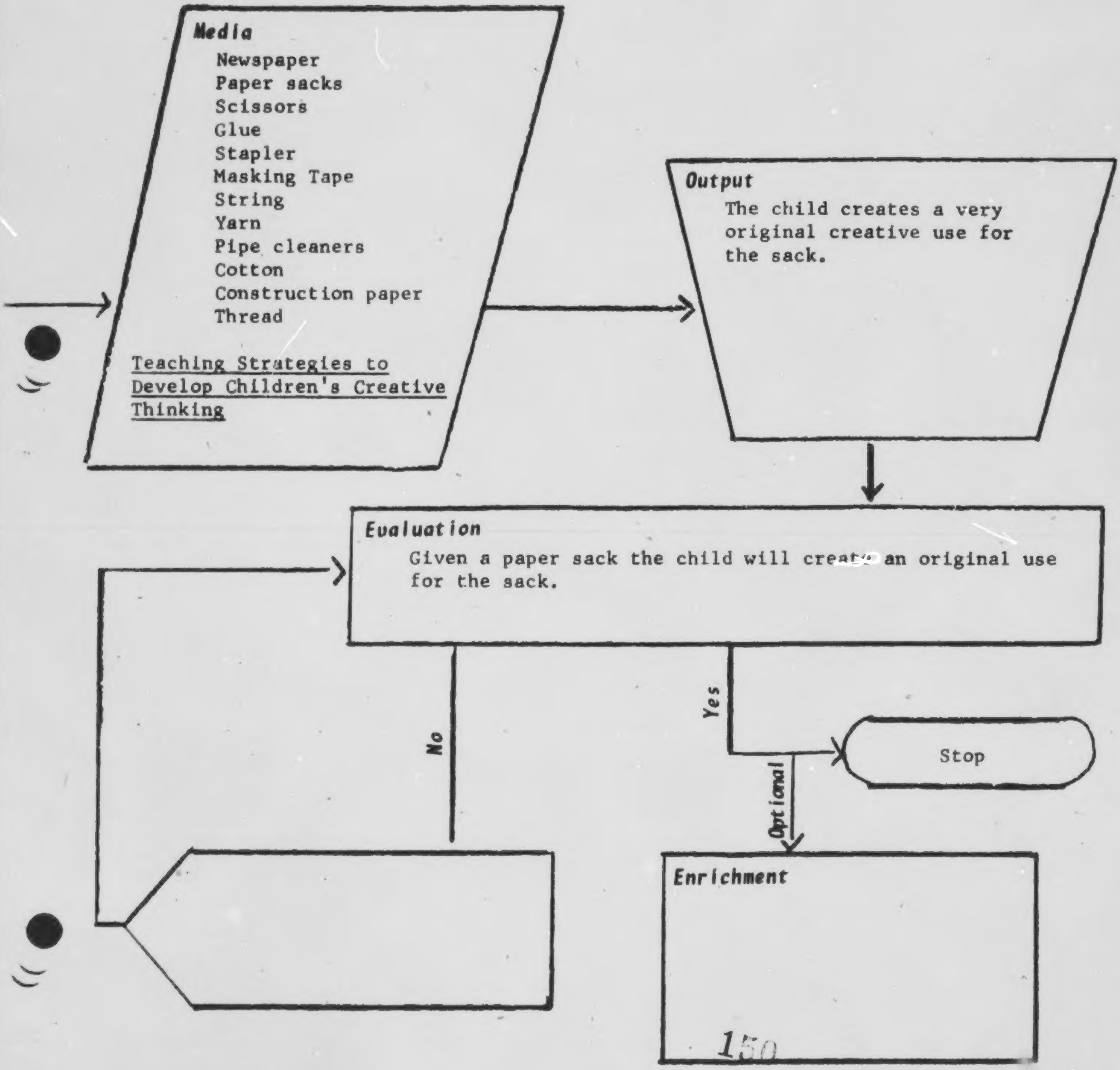


**Input**

List the "uses" for a newspaper. Discuss the meaning of fluency, flexibility, originality and elaboration.

**Learning Opportunities**

I: The teacher hands each child a large shopping bag size paper sack.
  - A: Children are asked to create a most unusual use for the paper sack.
  - B: No one is to know what the other one is constructing.
  - C: Close to end of activity stop and let children tell class what they are making.
  - D: Teacher asks children to elaborate on sack to make it even more unusual.



**Media**

- Newspaper
- Paper sacks
- Scissors
- Glue
- Stapler
- Masking Tape
- String
- Yarn
- Pipe cleaners
- Cotton
- Construction paper
- Thread

Teaching Strategies to Develop Children's Creative Thinking

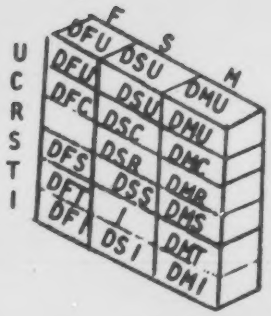
**Output**

The child creates a very original creative use for the sack.

**Evaluation**

Given a paper sack the child will create an original use for the sack.

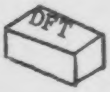
**Enrichment**



**Concept** Divergent Production

**Curricular Objective**

3.3.2 The child will create an original object from a small cardboard box.



**Input**

Brainstorm what you could do with a large carton big enough to hold a refrigerator.

**Learning Opportunities**

I: The teacher asks each child to bring a small cardboard box to school.

  A: A table of scraps (See 3.3.2.A) is provided for the children.

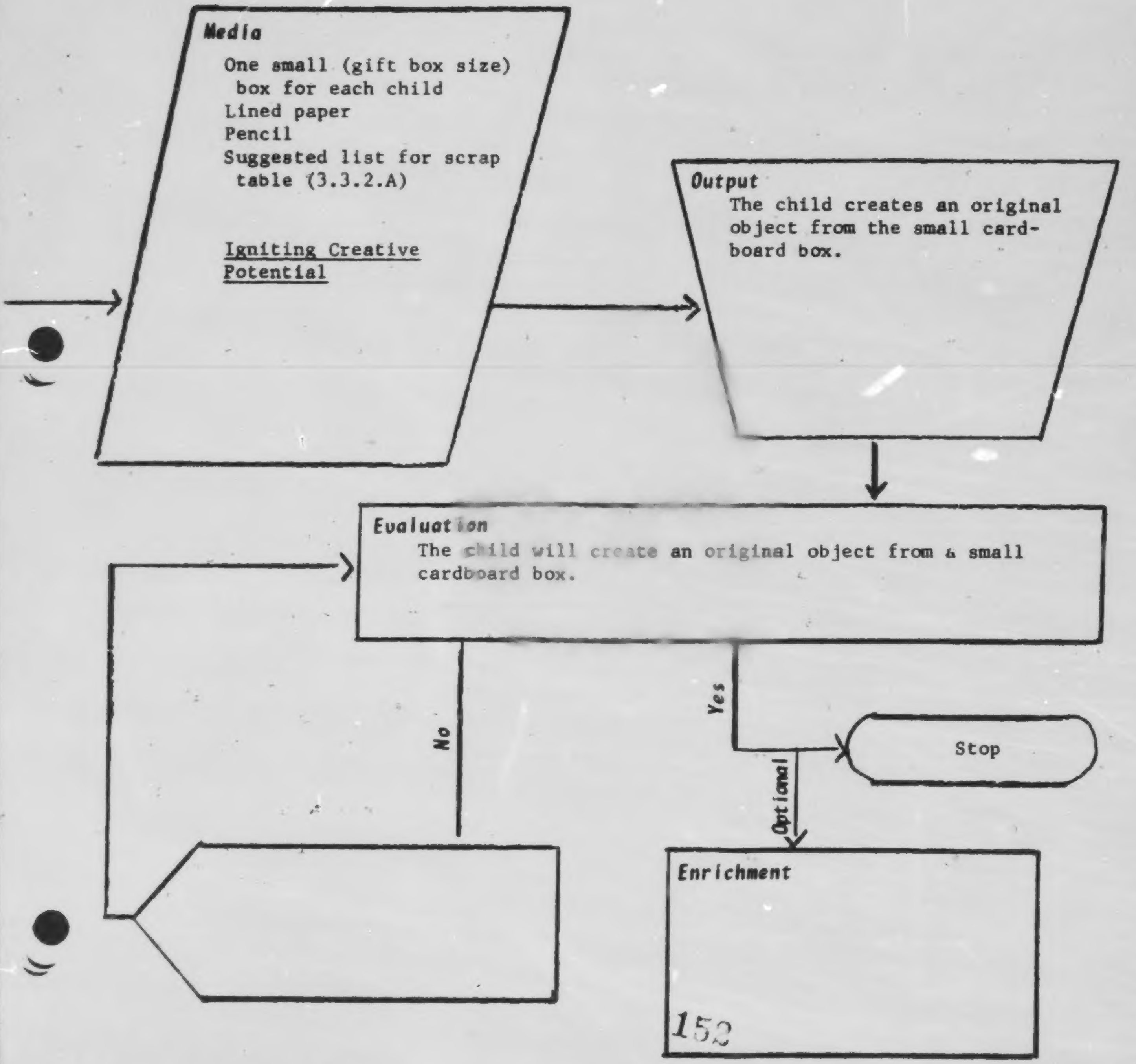
  B: Items for the scrap table may be furnished by the children in advance of this activity.

II: The teacher asks the children to create something unusual from their box which no one else has thought of.

  A: As children near the completion of their project the teacher will stop the class for sharing of objects made.

  B: Teacher asks children what more they could add to their object to make it even more unusual.

  C: Children may write stories or poems about their creation.



**Media**

- One small (gift box size) box for each child
- Lined paper
- Pencil
- Suggested list for scrap table (3.3.2.A)

Igniting Creative Potential

**Output**

The child creates an original object from the small cardboard box.

**Evaluation**

The child will create an original object from a small cardboard box.

No
Yes
Stop
Optional
Enrichment

Suggested materials for use in creating an object from a small gift box

- rick rack
- sequins
- material
- cotton
- pipe cleaners
- buttons
- construction paper
- yarn
- glue
- scotch tape

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**Concept** Divergent Production

**Curricular Objective**

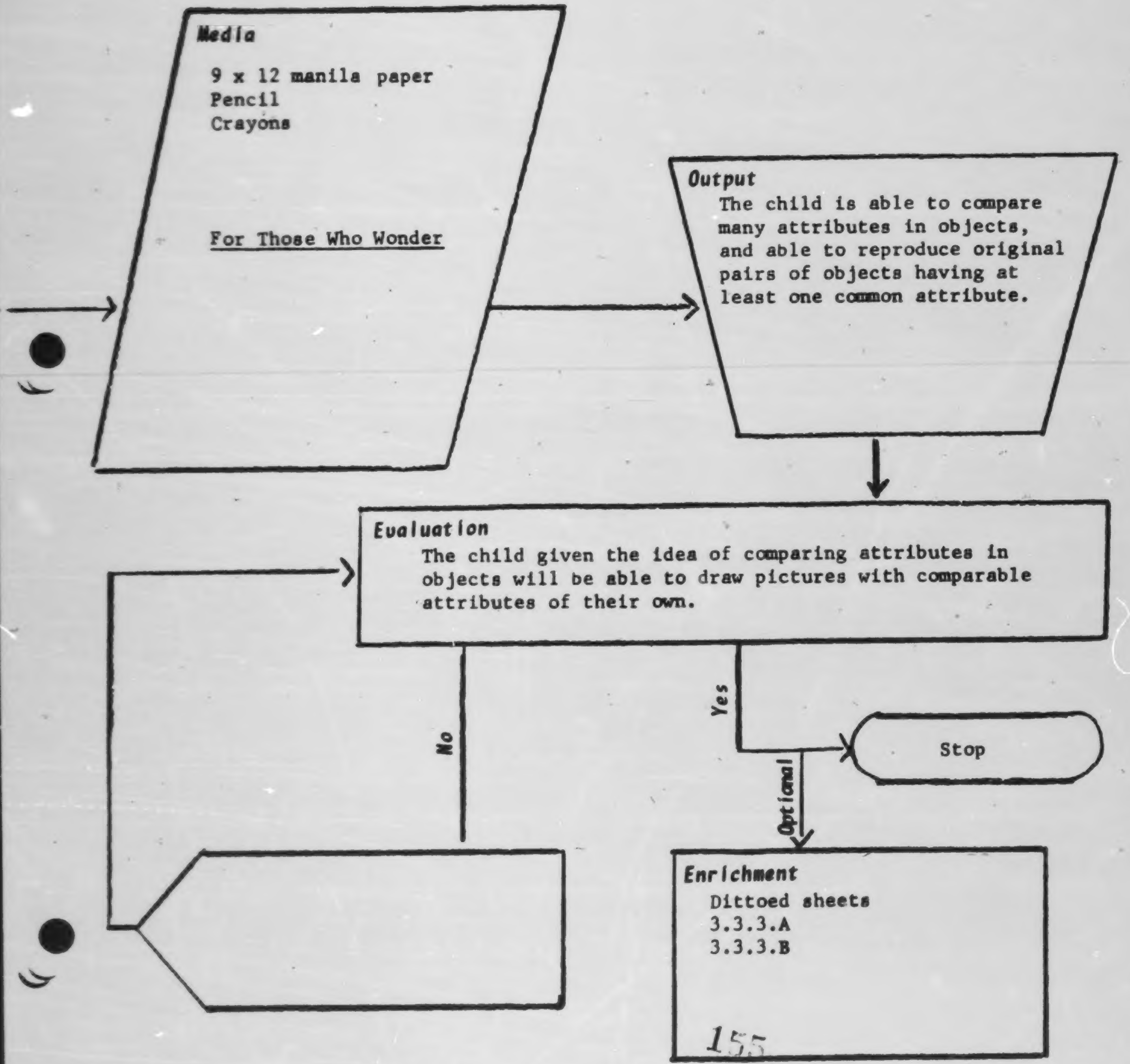
3.3.3 The child given the idea of comparing attributes in objects will be able to draw pictures with comparable attributes of their own.

**Input**

Discuss the meaning of attributes and give examples. Further discussion should center on how unlike objects can possess a like attribute, eg: a puppy, a cloud --because they are soft.

**Learning Opportunities**

I: Make a list of three to four pairs of objects, on the chalkboard, which possess the same quality or attribute.
- A: Distribute manila paper to children.
- B: Instruct them to fold the paper to make eight squares.
- C: The children are instructed to think of objects other than those on the chalkboard.
- D: Label each box with an attribute.
- E: They are to draw a picture of the two objects which represent this attribute and which no one else has thought of.



**Media**

9 x 12 manila paper
Pencil
Crayons

For Those Who Wonder

**Output**

The child is able to compare many attributes in objects, and able to reproduce original pairs of objects having at least one common attribute.

**Evaluation**

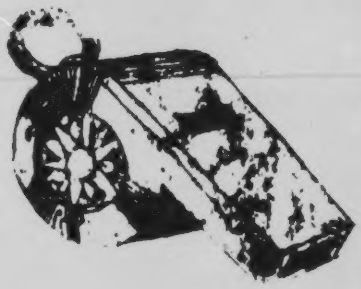
The child given the idea of comparing attributes in objects will be able to draw pictures with comparable attributes of their own.

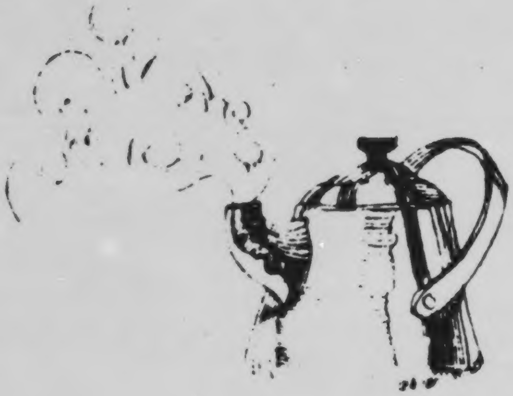
**Enrichment**

Dittoed sheets
3.3.3.A
3.3.3.B

# THINK TWICE

Why is a whistle





like a teakettle?

________________________________________

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Are they alike in any other way?

________________________________________________________

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Why or why not? ____________________________________

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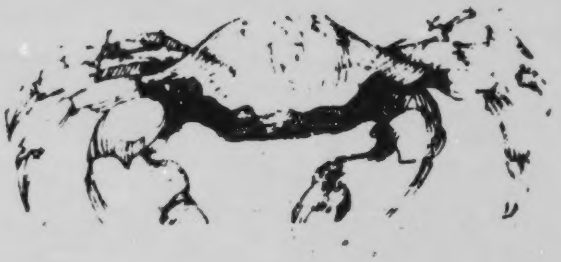
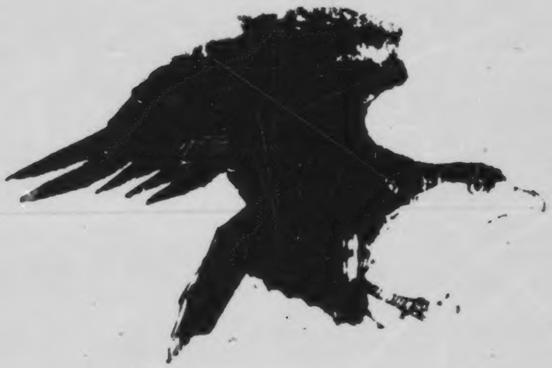
# THINK TWICE

Why is a crab



like a hawk?



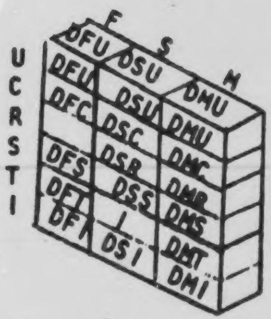
## THINK TWICE

Are they alike in any other way?

Why or why not?

Are a crab and a clam alike?

How?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**Concept** Divergent Production

**Curricular Objective**

3.3.4 The child will create an original game by using only basic materials.

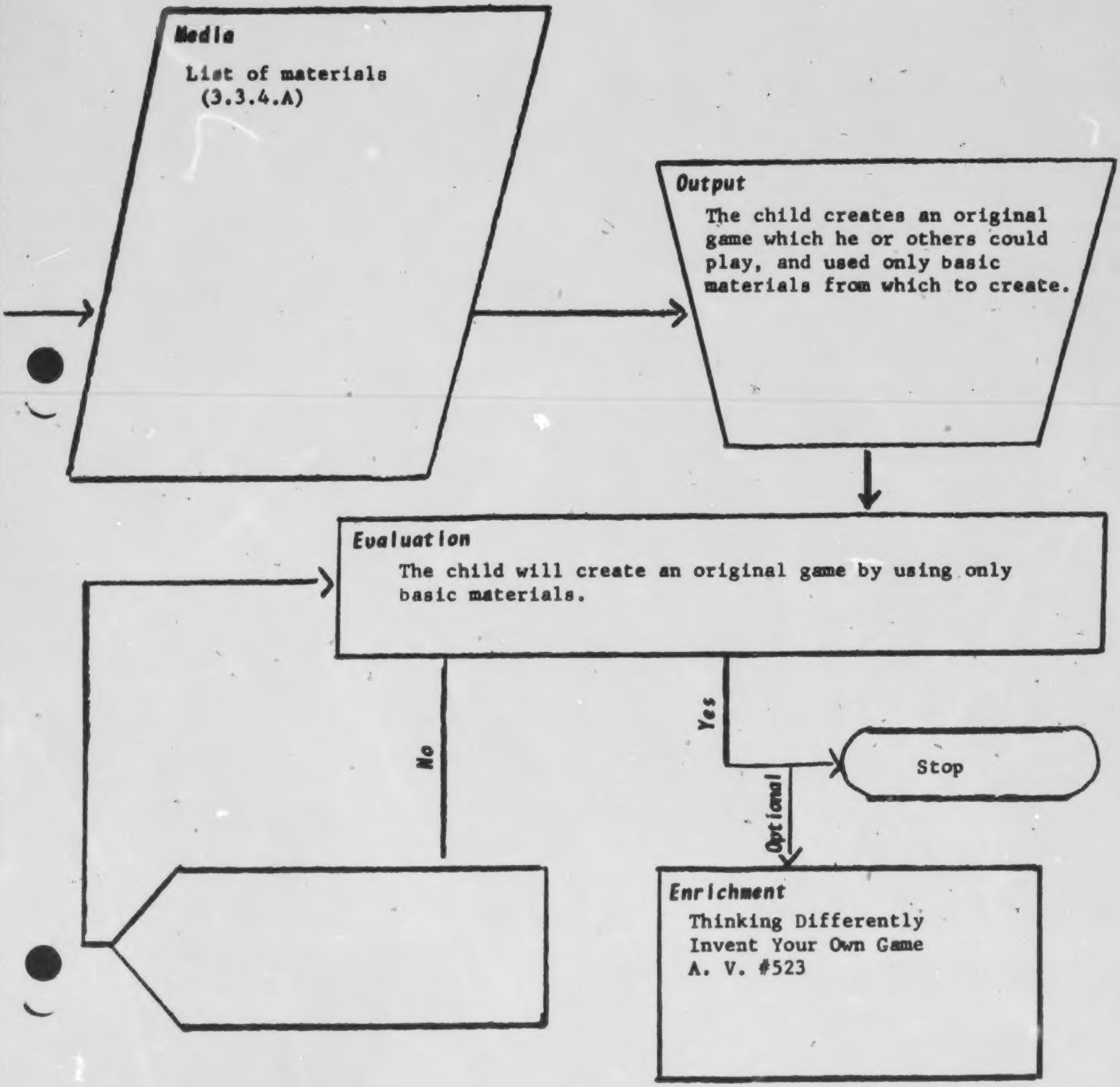
**Input**

A period preceding the actual construction of games will be spent in playing many different types of commercially prepared games.

**Learning Opportunities**

I: The teacher will evaluate with the children on how the many games were played, their structure and objectives.

- A: Brainstorm with children as to types of games they could make.
- B: List materials needed for making of the games (See 3.3.4.A).
- C: Children work on constructing games.
- D: Evaluation at the end of each period is essential to stimulate enthusiasm and seeing what more could be added to make their games more unusual and fun to play.



**Media**

List of materials (3.3.4.A)

**Output**

The child creates an original game which he or others could play, and used only basic materials from which to create.

**Evaluation**

The child will create an original game by using only basic materials.

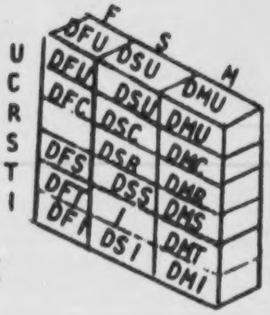
**Enrichment**

Thinking Differently
Invent Your Own Game
A. V. #523

This list below should be all that is provided for the children. Added items such as stickers, buttons, magazine pictures should be avoided as the child will tend to make use of these rather than creating the objects or pictures themselves.

Suggested list of materials for construction of games:

tagboard
chipboard
stapler and staples
pins
rulers
scissors
construction paper
string
thread
brads
hole punch
crayons
cado pens
glue
paint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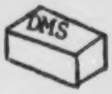
**Concept** Divergent Production

**Curricular Objective**

3.3.5 The child will be able to create an imaginary animal and develop his drawing into a story.



**Input**

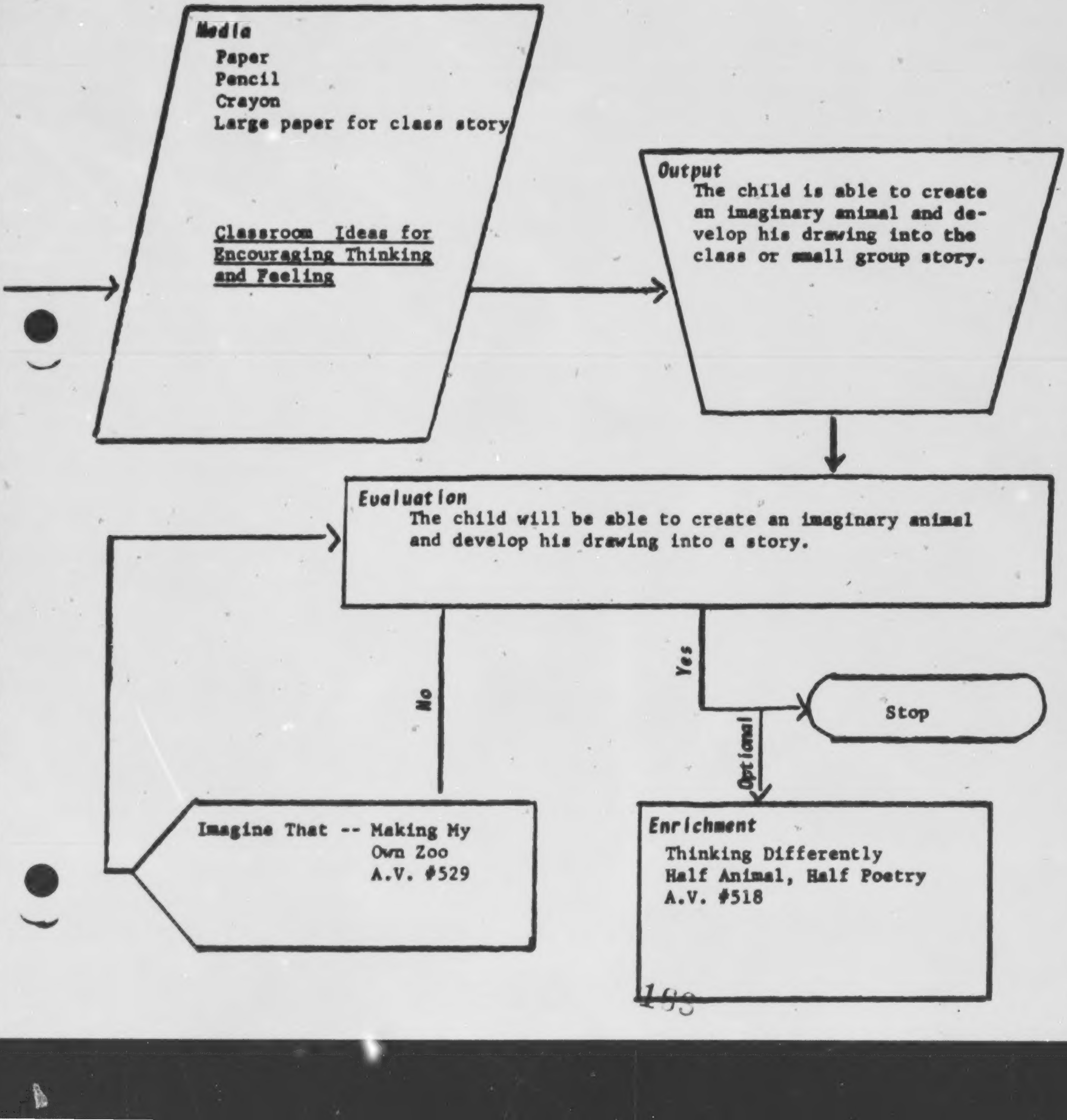
Discuss the attributes of various animals.

**Learning Opportunities**

I: The teacher gives each child a paper on which they may draw a picture of an imaginary animal.

II: The teacher instructs the child to include the following: (See 3.3.5.A)
- A: A word to tell the name of what he had drawn.
- B: A sentence to tell something about it.
- C: A sentence to tell what it did.
- D: Something it might have said.

III: The class or group makes up an opening for a story and each child in turn adds on a part using his or her picture to illustrate and tell more about the story.



**Media**

Paper
Pencil
Crayon
Large paper for class story

Classroom Ideas for Encouraging Thinking and Feeling

**Output**

The child is able to create an imaginary animal and develop his drawing into the class or small group story.

**Evaluation**

The child will be able to create an imaginary animal and develop his drawing into a story.

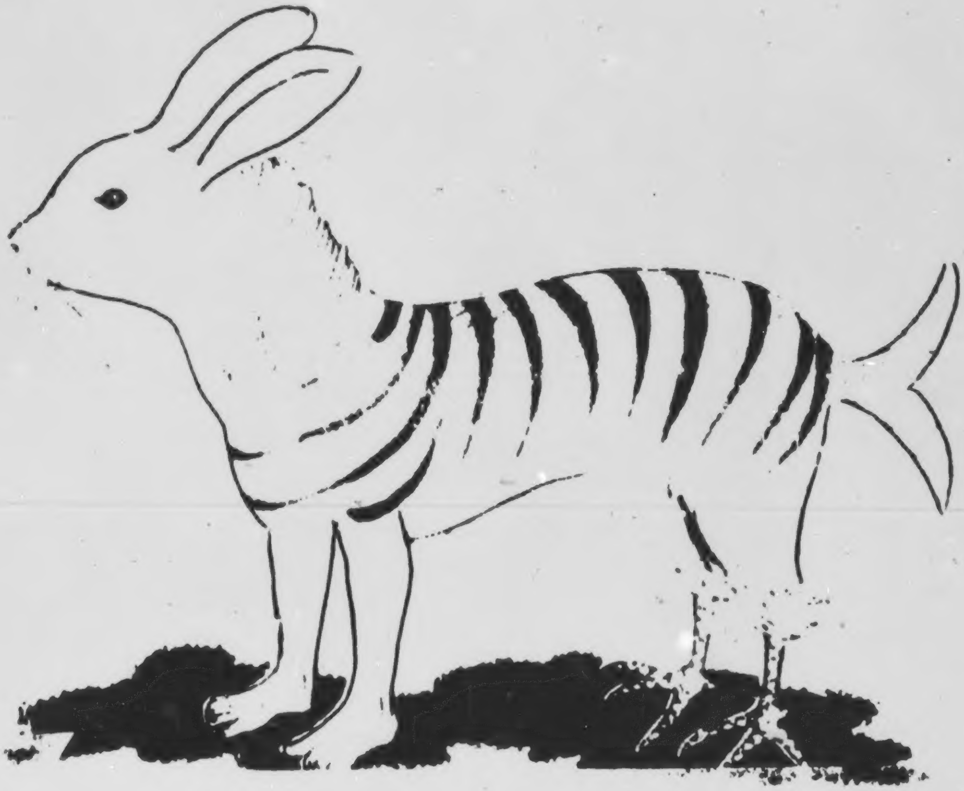
Imagine That -- Making My Own Zoo
A.V. #529

**Enrichment**

Thinking Differently
Half Animal, Half Poetry
A.V. #518

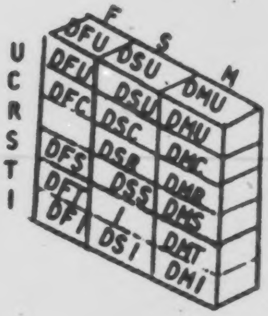
# (A) THE RABGERISH

(D) My feet hurt!



(B) This is a timid, wild animal who loves to eat sea carrots.

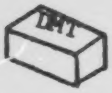
(C) As he was grazing around the bottom of the ocean munching on sea carrots, he stubbed his big toe.



**Concept** Divergent Production

**Curricular Objective**

3.3.6 The child will be able to write unusual and clever titles for a comical picture.



**Input**

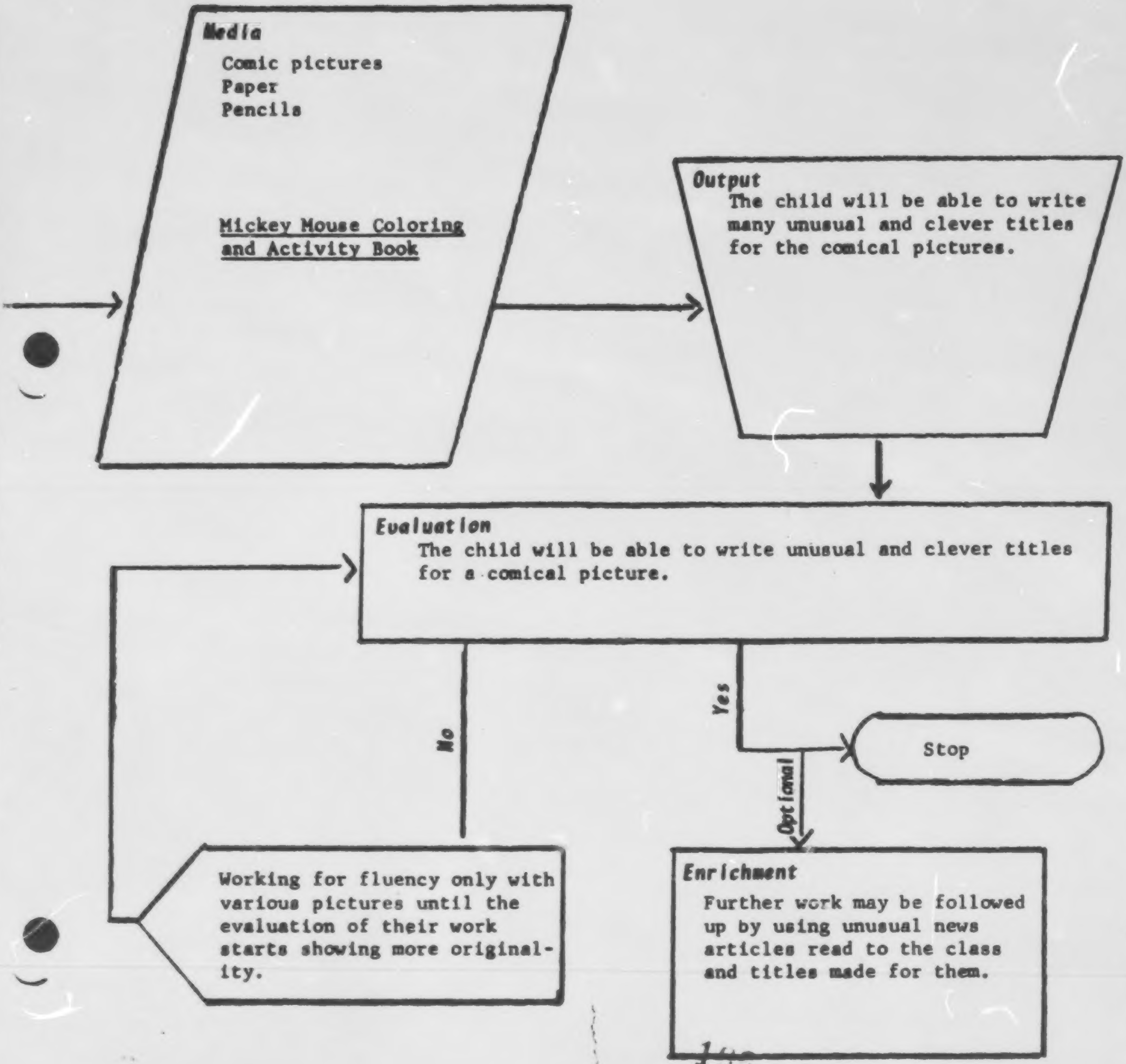
Discuss originality as the ability to produce your own unusual or clever titles for a picture or situation. Stress the idea of fluency in this activity as not only the "flow of ideas" but the writing of these ideas without evaluating them as to whether or not they are good or bad at this time.

**Learning Opportunities**

I: The teacher may present one comical picture to the class or give each child their own individual one.

A: She asks the children to write as many clever titles for the picture as they can possibly think of in ten minutes.

B: At the end of the time the teacher will ask the child to go over their lists and pick out their most unusual title and share picture and title with the class.



**Media**

Comic pictures
Paper
Pencils

Mickey Mouse Coloring and Activity Book

**Output**

The child will be able to write many unusual and clever titles for the comical pictures.

**Evaluation**

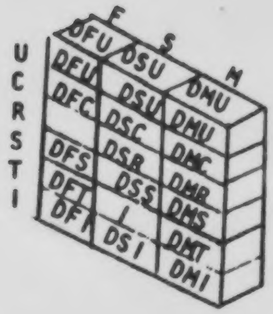
The child will be able to write unusual and clever titles for a comical picture.

Working for fluency only with various pictures until the evaluation of their work starts showing more originality.

**Enrichment**

Further work may be followed up by using unusual news articles read to the class and titles made for them.

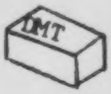
Recommended for 4th grade only



**Concept** Divergent Production

**Curricular Objective**

3.3.7 Given an antecedent of "I Could Have Been but......", the child will be able to answer with a clever or unusual response which relates to the antecedent.



**Input**

Discuss originality.
Point out to the children that the ability to transform words or ideas into clever or unusual responses is a definite asset to anyone's speech or writing. She will point out that some are more capable in this area than others.

**Learning Opportunities**

I: The teacher introduces game of "I could have been but....."

A: The children should be asked to think up an unusual or clever response to the following underlined examples:

1. I could have been a firecracker (but my pop wouldn't let me.)
2. I could have been a chimney but (I wasn't allowed to smoke)

B: The teacher should point out that the antecedent must be related to the product or consequence.

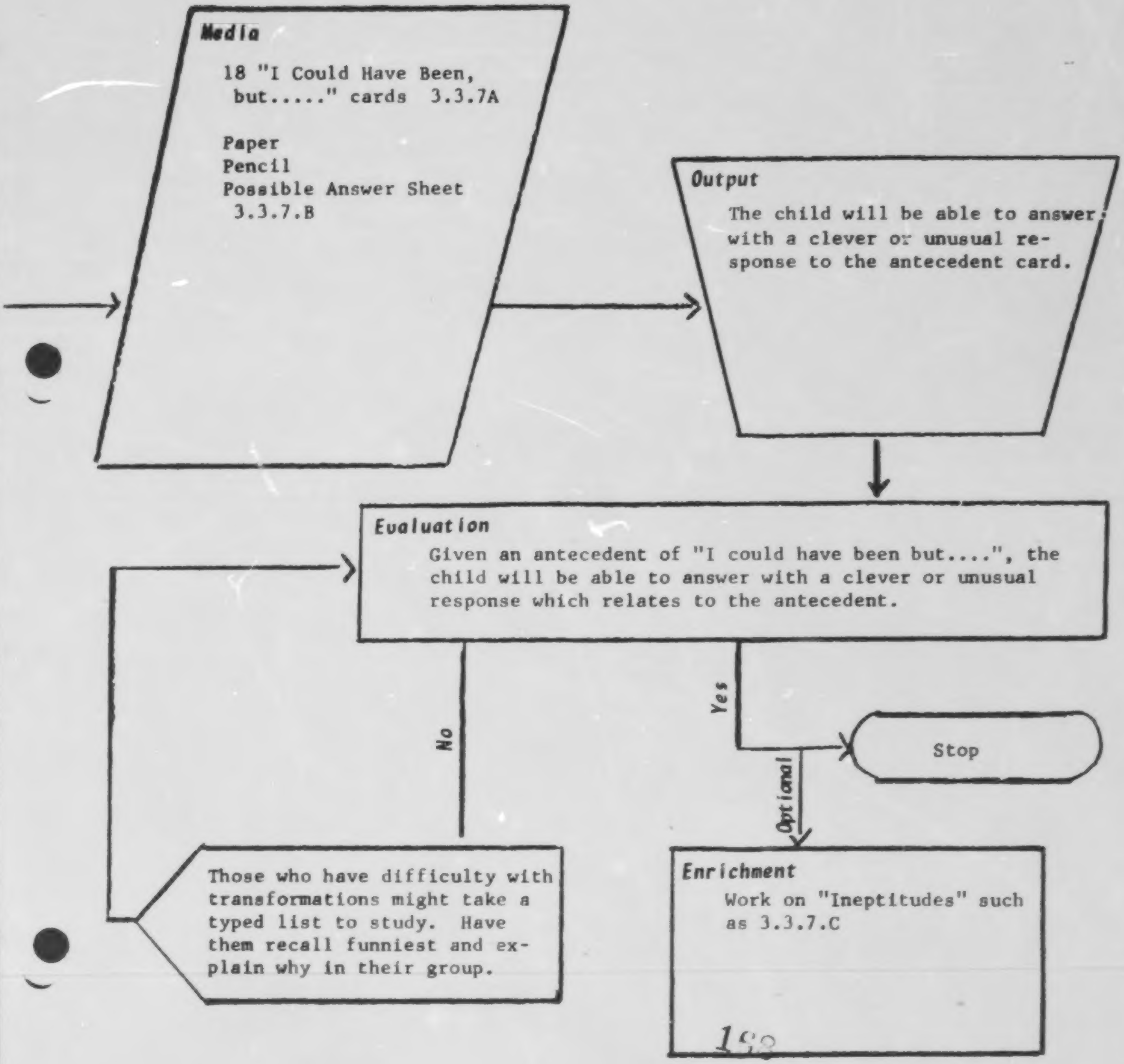
C: Divide class into 3 to 4 groups and give them 3 to 4 cards of antecedents (See 3.3.7.A)

D: Groups brainstorm for clever responses to antecedents.

E: After 10 minutes bring groups together to share their responses.

F: Break into groups once more to brainstorm their own antecedents and consequences or products.

G: Bring groups back once more to share their antecedents and consequences or products.



Media

18 "I Could Have Been, but....." cards 3.3.7A

Paper
Pencil
Possible Answer Sheet 3.3.7.B

Output

The child will be able to answer with a clever or unusual response to the antecedent card.

Evaluation

Given an antecedent of "I could have been but....", the child will be able to answer with a clever or unusual response which relates to the antecedent.

No
Yes
Stop
Optional

Those who have difficulty with transformations might take a typed list to study. Have them recall funniest and explain why in their group.

Enrichment

Work on "Ineptitudes" such as 3.3.7.C

I could have been a tower but ______

______________________________

______________________________

2.

I would have been a knife but ______

______________________________

______________________________

3.

I could have been the wind but ______

______________________________

______________________________

4.

I could have been a tailor but ______

______________________________

______________________________

5.

I could have been a steam roller but

______________________________

______________________________

6.

I could have been a magician but ______

______________________________

______________________________

7.

I would have been an electrician but ________________________________

________________________________

8.

I would have been a clock but ________________________________

________________________________

9.

I would have been an actor but ________________________________

________________________________

10.

I would have been a piece of elastic but ________________________________

________________________________

11.

I could have been a window but ________________________________

________________________________

12.

I could have been a door but ________________________________

________________________________

I could have been a light but ____
________________________________
________________________________

14.

I could have been a circle but ____
________________________________
________________________________

15.

I could have been a trumpet but ____
________________________________
________________________________

16.

I could have been a picture but ____
________________________________
________________________________

17.

I could have been a verb but ____
________________________________
________________________________

18.

I could have been Tarzan but ____
________________________________
________________________________

## Possible Solutions for 3.3.7.A

1. ...I wouldn't stand for it.

2. ...I couldn't cut it.

3. ...I blew it.

4. ...it just didn't seem right.

5. ...it was too depressing.

6. ...my ambition kept disappearing.

7. ...the idea shocked my parents.

8. ...that was too alarming.

9. ...I couldn't play the part.

10. ...but that would be stretching it.

[illegible]. ...it was a real pane.

12. ...I wouldn't handle it.

13. ...I wasn't bright enough.

14. ...I wanted to go straight.

15. ...the idea was banned.

16. ...I was framed.

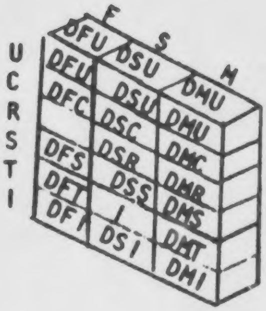
17. ...I was too tense.

18. ...I couldn't swing it.

# INEPTITUDES

1. ....the artist who couldn't draw flies.
2. ....the owl that doesn't give a hoot.
3. ....the secretary who isn't the type.
4. ....the chauffer who can't drive a nail.
5. ....the outfielder who couldn't catch a bus.
6. ....the undertaker who wouldn't bury the hatchet.
7. ....the dermatologist whose patients got under his skin.
8. ....the puppeteer who wouldn't string along.
9. ....the butcher who made cutting remarks.
10. ....the weight lifter who couldn't raise the rent.

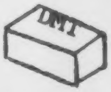
Notice the play on words in each example. Try to create more silly examples like these.



**Concept** Divergent Production

**Curricular Objective**

3.3.8 The child will be able to understand what type of occasions create proverbs and will be able to devise a new occasion in which he can create his own proverb.



**Input**

In reviewing the proverbs presented in lesson 4.1, discuss with the class the type of situation or occasion to which the proverbs were related.

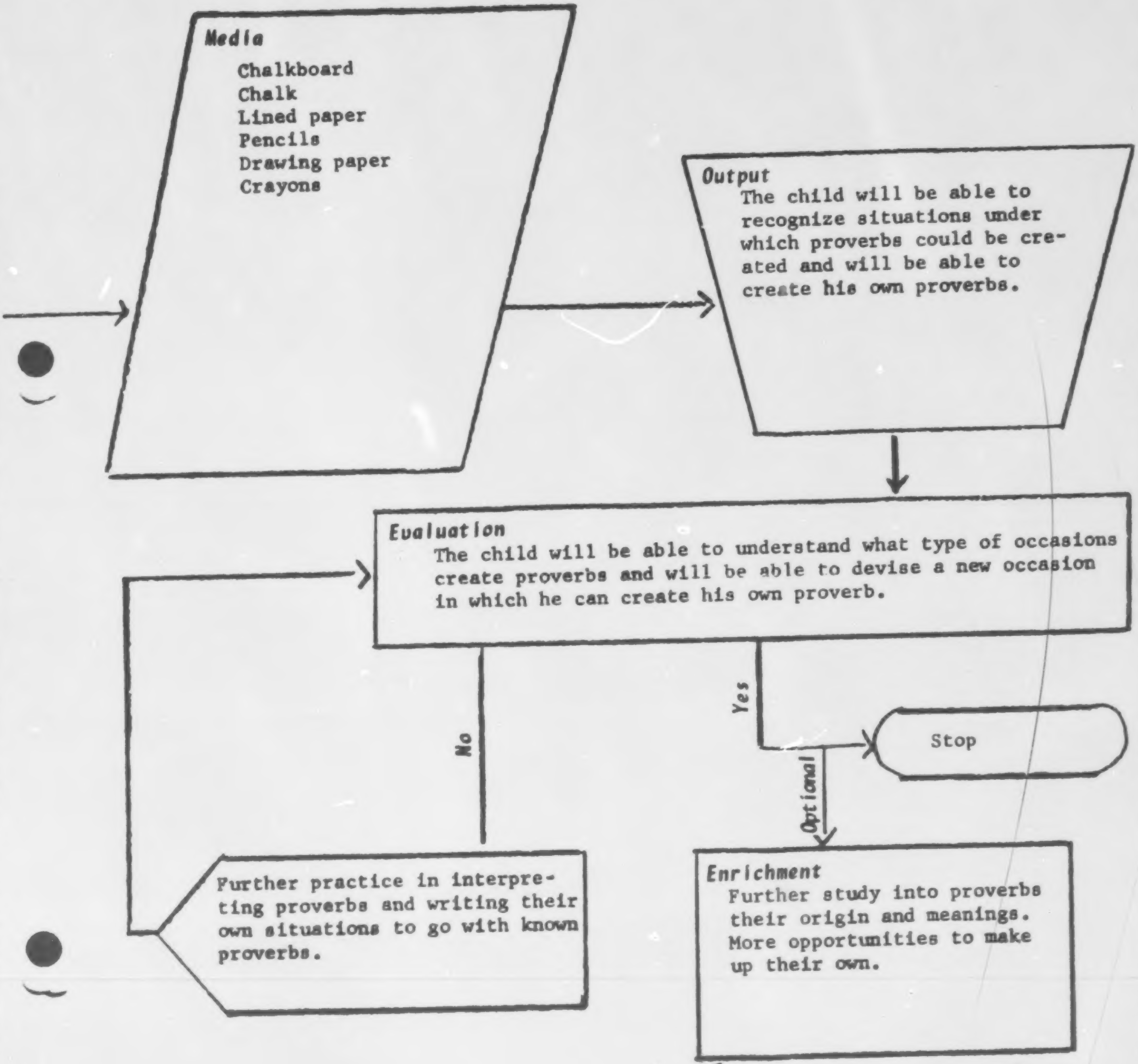
Look before you leap could be related to safety or awareness. List them on the board.

**Learning Opportunities**

I: The teacher discusses with the children other types of situations or occasions from which proverbs could evolve. The children's ideas are listed on the board.

II: The teacher then asks the children to choose a few of the situations listed on the board and make up their own proverbs to fit each one.

III: The children may be asked to illustrate their proverb for a continuance of the activity.



*Media*

Chalkboard
Chalk
Lined paper
Pencils
Drawing paper
Crayons

*Output*

The child will be able to recognize situations under which proverbs could be created and will be able to create his own proverbs.

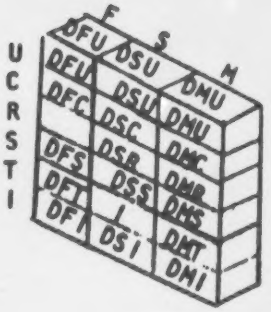
*Evaluation*

The child will be able to understand what type of occasions create proverbs and will be able to devise a new occasion in which he can create his own proverb.

Further practice in interpreting proverbs and writing their own situations to go with known proverbs.

*Enrichment*

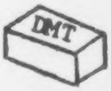
Further study into proverbs their origin and meanings. More opportunities to make up their own.



**Concept** Divergent Production

**Curricular Objective**

3.3.9 The child will become familiar with and create his own alliterations (tongue twisters).



**Input**

Discuss alliterations with the children as the placing together of two or more words beginning with identical or closely similar sounds. They have been cultivated in different languages, particularly in verse. They are meant to be recited rather than sung.

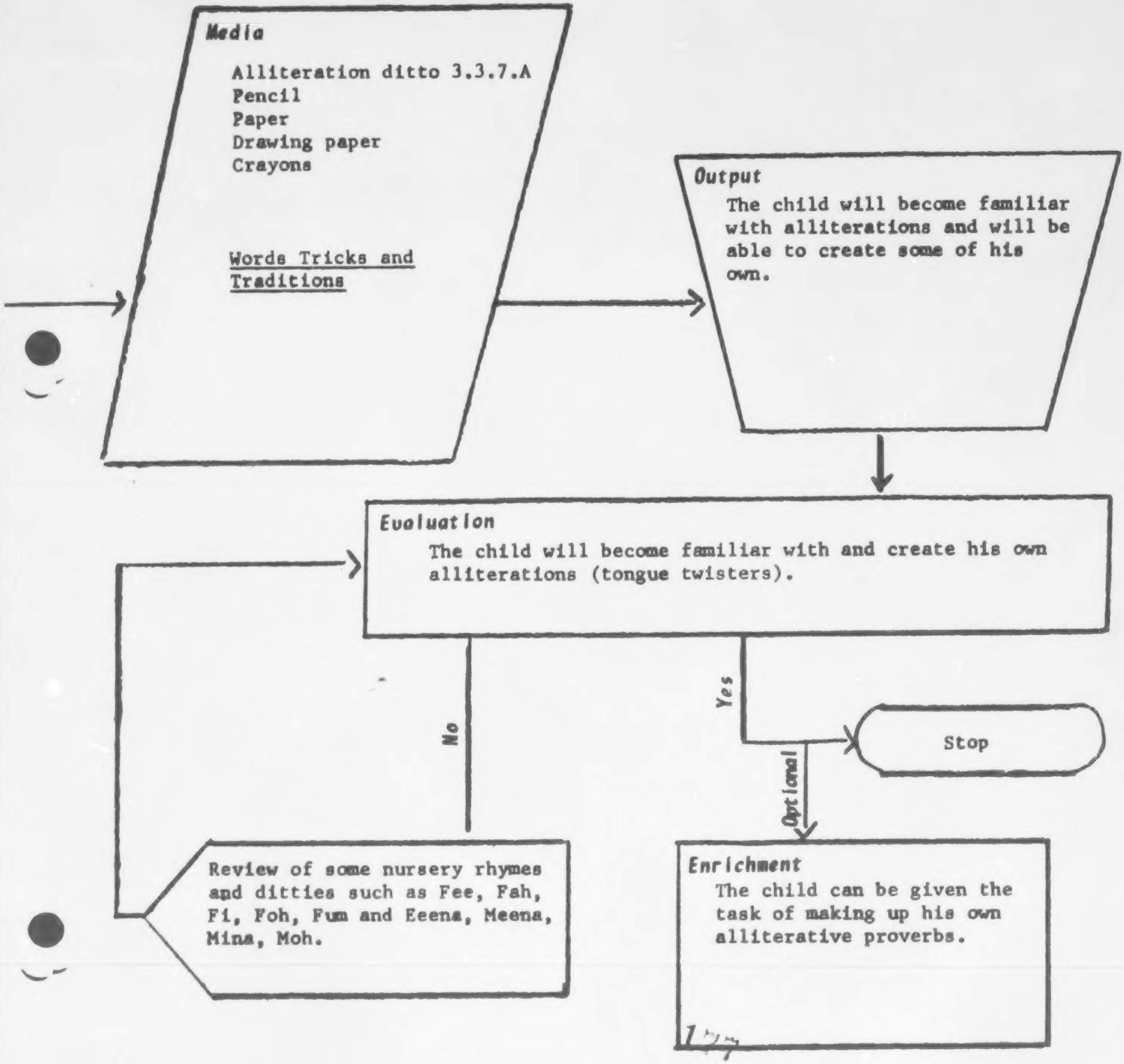
Discuss also that some proverbs are in alliteration form and owe much of their popularity to the alliterative appeal.

**Learning Opportunities**

I: The teacher distributes a ditto of alliterations to the class. (See 3.3.9.A)

A: The children are given time to enjoy reciting the alliterations from the ditto.

II: The children are then given the task of making up their own alliterations and illustrating them.



**Media**

Alliteration ditto 3.3.7.A
Pencil
Paper
Drawing paper
Crayons

Words Tricks and Traditions

**Output**

The child will become familiar with alliterations and will be able to create some of his own.

**Evaluation**

The child will become familiar with and create his own alliterations (tongue twisters).

Review of some nursery rhymes and ditties such as Fee, Fah, Fi, Foh, Fum and Eeena, Meena, Mina, Moh.

**Enrichment**

The child can be given the task of making up his own alliterative proverbs.

# ALLITERATIONS

Alliterations is the placing together of two or more words beginning with the same or closely similar words.

## Short Alliterations

1. Busy bee
2. Fair or foul
3. Higgledy piggledy
4. Now or never
5. Spick and span

## Long Alliterations

1. A noise annoys an oyster but a noisy noise annoys an oyster more.
2. How much wood would a wood chuck chuck, if a woodchuck could chuck wood.
3. Sister Susie, seated serenly on the satin sofa, sews silk socks.

## Longer Alliterations

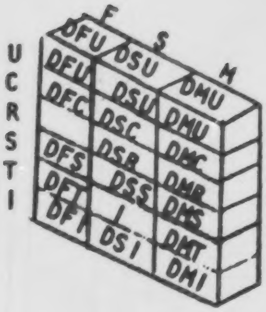
1. She sells sea shells on the sea shore. The shells she sells are sea shells I'm sure; and if she sells sea shells on the sea shore then I'm sure she sells sea shore shells.
2. Swan swam over the sea  
   Swim swan, swim  
   Swan swam back again  
   Well swum, swan!
3. A skunk stood on a stump. The stump thunk the skunk stunk  
   But the skunk thunk the stump stunk.

## ALLITERATIVE PROVERBS

Many proverbs owe much of their popularity to alliterative appeal. No only do like sounds please the ear, but they assist the memory. Here are a few:

1. The Fat is in the Fire
2. As Fit as a Fiddle
3. Last but not Least
4. Practice what you Preach.
5. A Barking dog seldom Bites.

Now see what you can do. Be divergent and think up some alliterations and alliterative proverbs of your own.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DSR
DMC
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DMR
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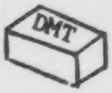
**Concept** Divergent Production

**Curricular Objective**

3.3.10 The child will be able to use his imagination and tell in what way two unrelated words are alike.



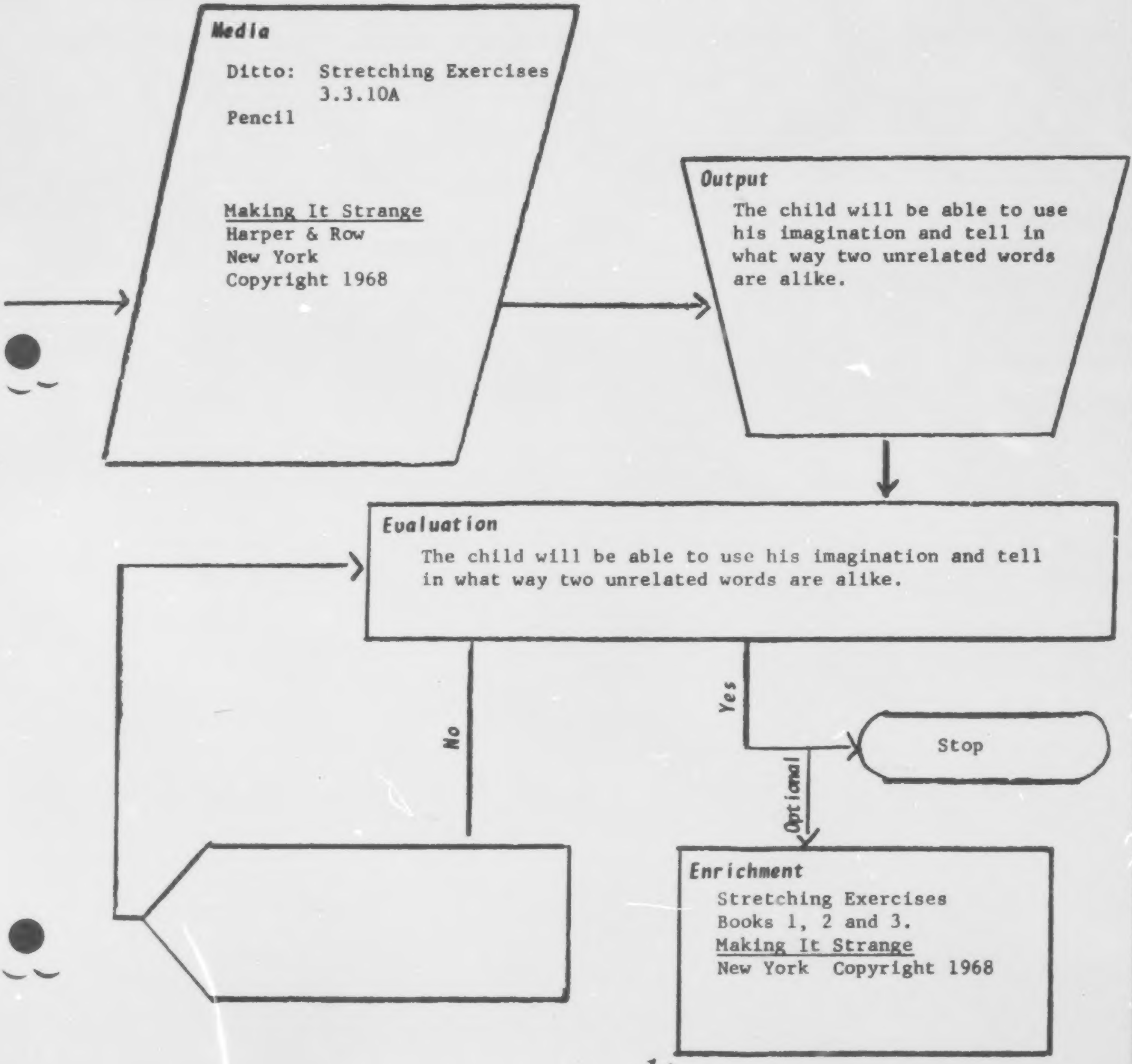
**Input**

Discuss the idea of comparisons. Review similes explaining they are figures of speech in which two dissimilar things are compared by the use of "like" or "as". This lesson is similar to similes but here one must stretch their imaginations.

**Learning Opportunities**

I: The teacher passes out the ditto of Stretching Exercises (See 3.3.10A)

A: She should encourage the children to keep stretching their mind for unusual and clever responses.



***Media***

Ditto: Stretching Exercises
3.3.10A
Pencil

Making It Strange
Harper & Row
New York
Copyright 1968

***Output***

The child will be able to use his imagination and tell in what way two unrelated words are alike.

***Evaluation***

The child will be able to use his imagination and tell in what way two unrelated words are alike.

***Enrichment***

Stretching Exercises
Books 1, 2 and 3.
Making It Strange
New York Copyright 1968

# Stretching Exercises

What FOOD is like SHOE LACES?

______________________________

Why? ____________________________________________________________

____________________________________________________________________

A SNOW-TOPPED MOUNTAIN is like

__________________________________________ because __________

____________________________________________________________________

____________________________________________________________________

What ANIMAL do you think is like a BALL?

____________________________________________________________________

Why? ____________________________________________________________

____________________________________________________________________

____________________________________________________________________

What LIVING THING do you think is like a BULLDOZER?

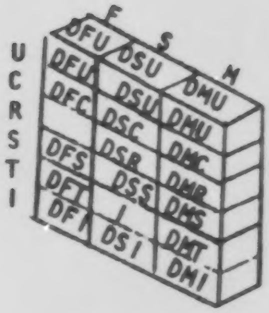
____________________________________________________________________

Why? ____________________________________________________________

____________________________________________________________________

____________________________________________________________________

Excerpt from Making It Strange, Harper and Row, Publishers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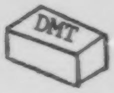
**Concept** Divergent Production

**Curricular Objective**

3.3.11 The child will be able to think of words related to a given word.



**Input**

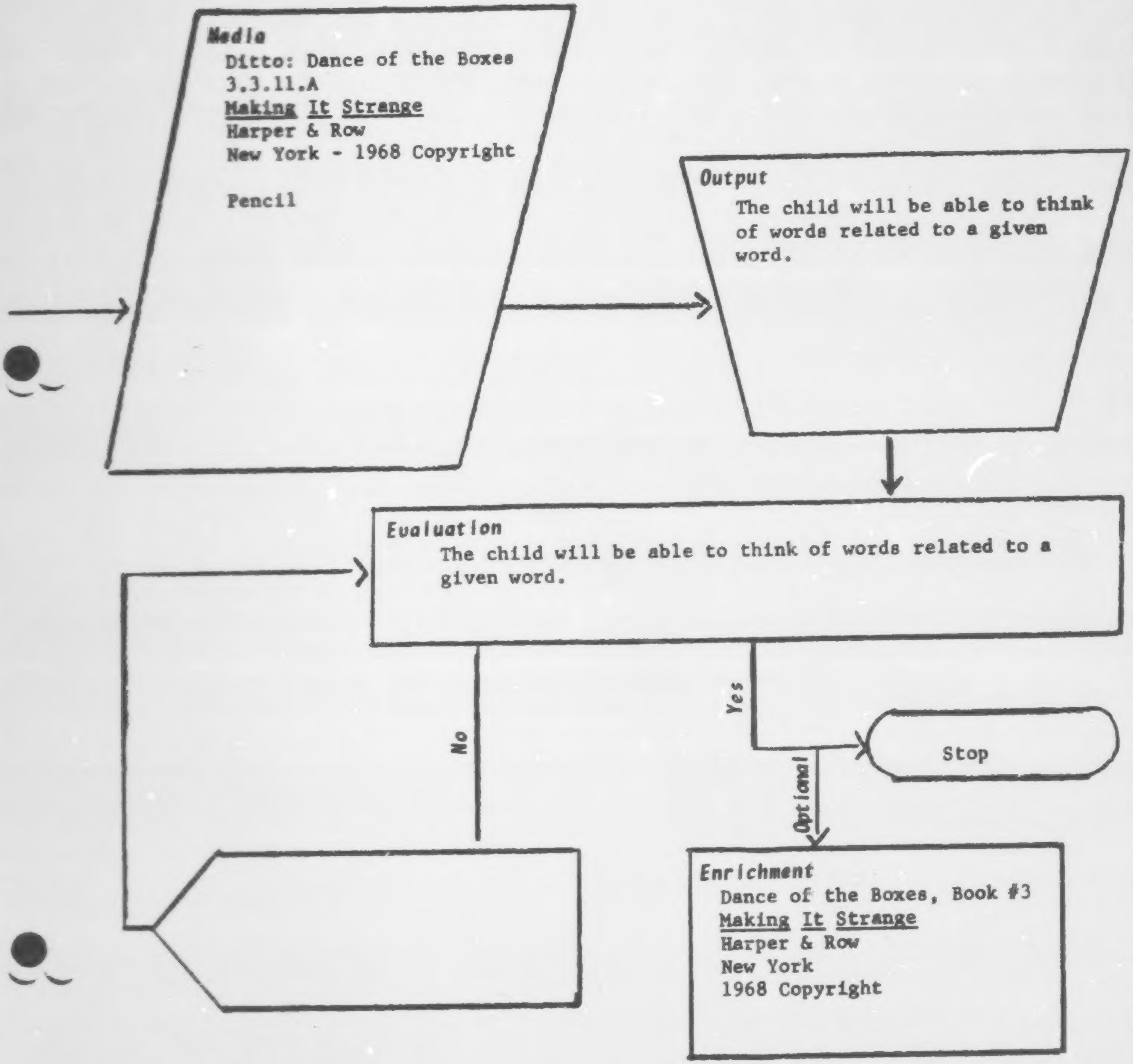
Discuss with the children the importance of letting their mind wander, freeing it from all thought and concentrating on the words.

Use of the imagination should be stressed as in the Stretching Exercise lesson 3.3.10.

**Learning Opportunities**

I: The teacher presents each child with the booklet: Dance of the Boxes (See 3.3.11.A)

A: The teacher explains the ditto and supervises the children as they proceed through the exercise



*Media*
Ditto: Dance of the Boxes
3.3.11.A
Making It Strange
Harper & Row
New York - 1968 Copyright

Pencil

*Output*
The child will be able to think of words related to a given word.

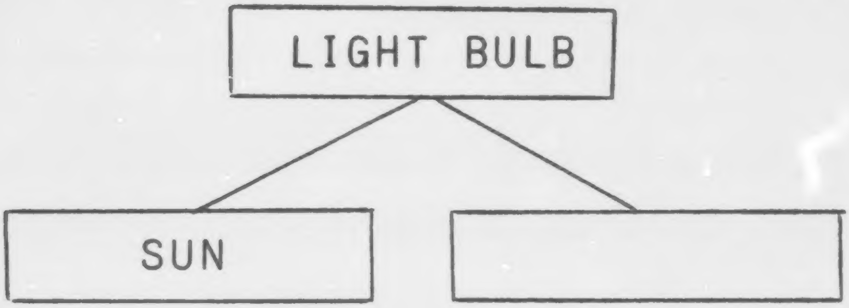
*Evaluation*
The child will be able to think of words related to a given word.

*Enrichment*
Dance of the Boxes, Book #3
Making It Strange
Harper & Row
New York
1968 Copyright

# DANCE OF THE BOXES

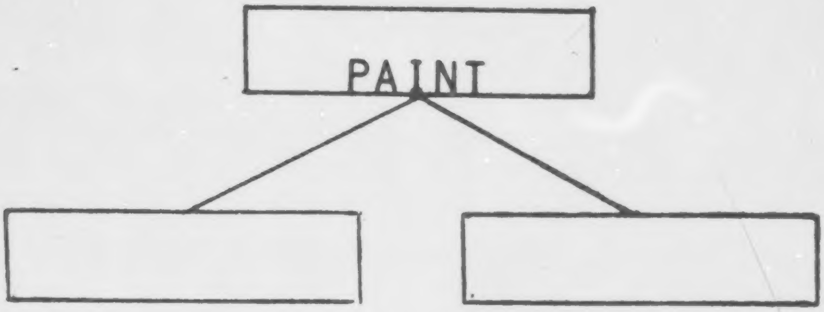
In this lesson you will be letting your mind wander from word to word. The first word will be given to you. Write in the word or words it makes you think of.

For example, when you see the words LIGHT BULB you might think of the SUN. Does LIGHT BULB make you think of anything else? Write your idea in the blank box.

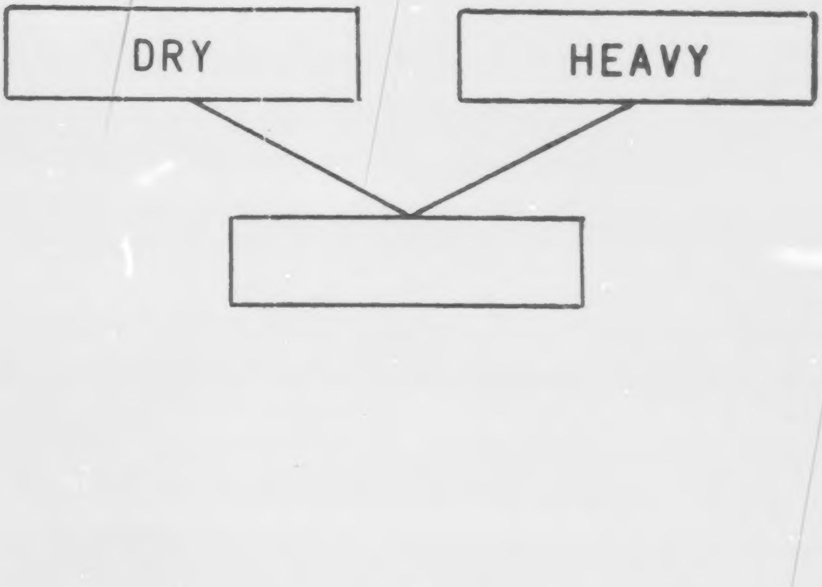


Excerpt from Making It Strange, Harper and Row Publishers

What two words does PAINT make you think of?

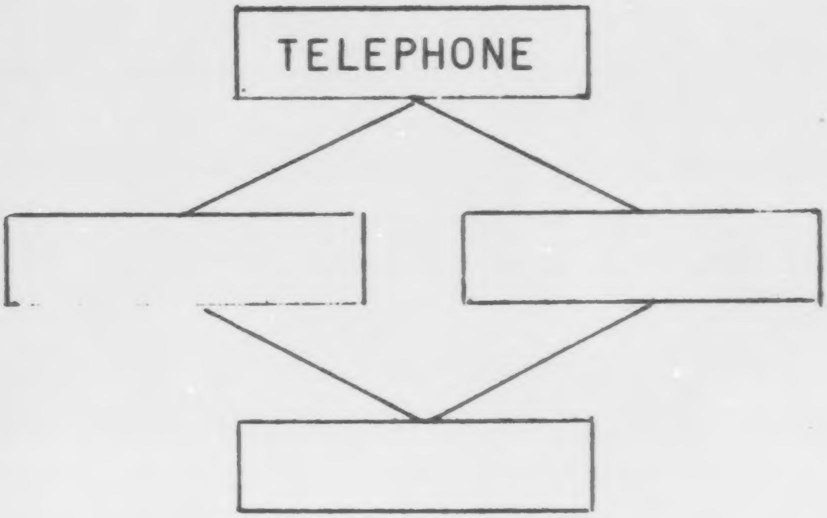


It is fun to see what word comes to mind after you have looked at two other words. For example, what word do you think of when you see the words DRY and HEAVY? Write it in the blank box.



Excerpt from Making It Strange, Harper and Row Publishers

Now you are on your own.
Do not write the same word more than once.



What word have you written in the last box? ________________

How is it like TELEPHONE? ________

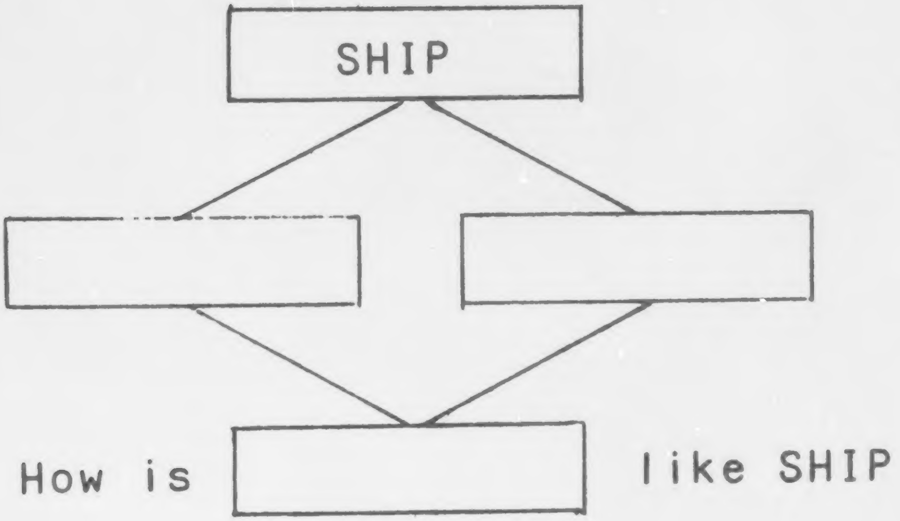
__________________________________________

__________________________________________

__________________________________________

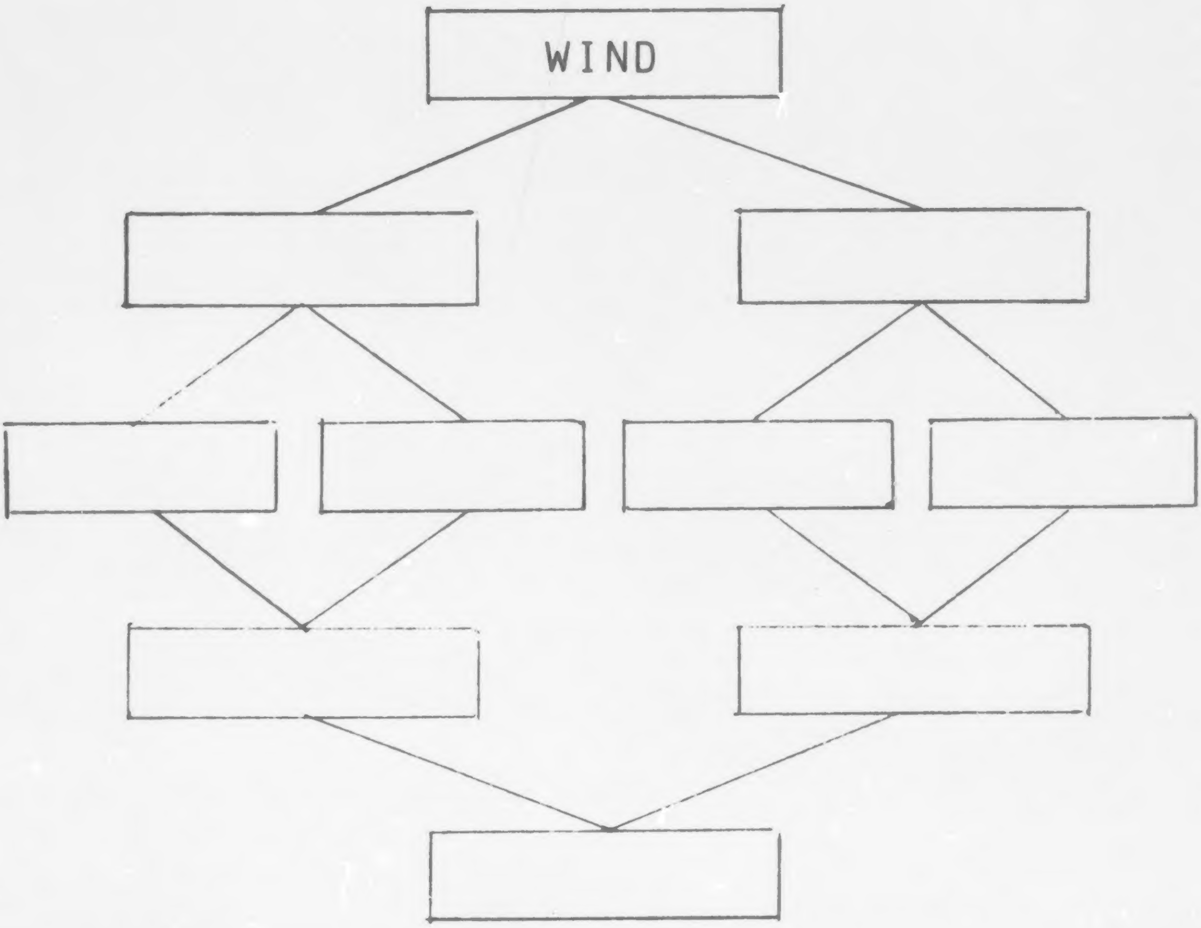
__________________________________________

Excerpt from Making It Strange, Harper and Row Publishers


SHIP
How is
like SHIP

Excerpt from Making It Strange, Harper and Row Publishers

Try a Super Box Dance!
Just follow the lines and write
your words in the blank boxes.



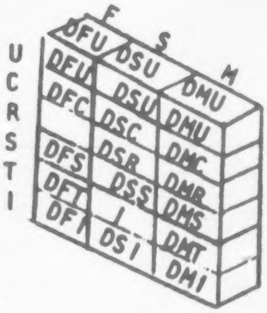
Excerpt from Making It Strange, Harper and Row Publishers

How is your last word like WIND?

Tell what the two words have in common.

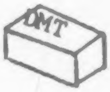
Tell how your word is unlike WIND.

Excerpt from Making It Strange, Harper and Row Publishers



**Concept** Divergent Production

**Curricular Objective**
3.3.12 The child will be able to create an advertising poster of a given state and use a "play on words" from chosen features to advertise the state.



**Input**

Discuss with the children how the names of places, rivers, mountains, deserts and even features in the United States can bring to mind a humorous meaning other than what it was intended. Some of them can even be tied into similes, proverbs, rebuses, alliterations, compound words etc.

Discuss what advertising slogans are and how advertising today is geared to the catchy phrases and gimmicks to attract people to visit. Write some examples of places on the blackboard and let children put them into catchy slogans, ie:

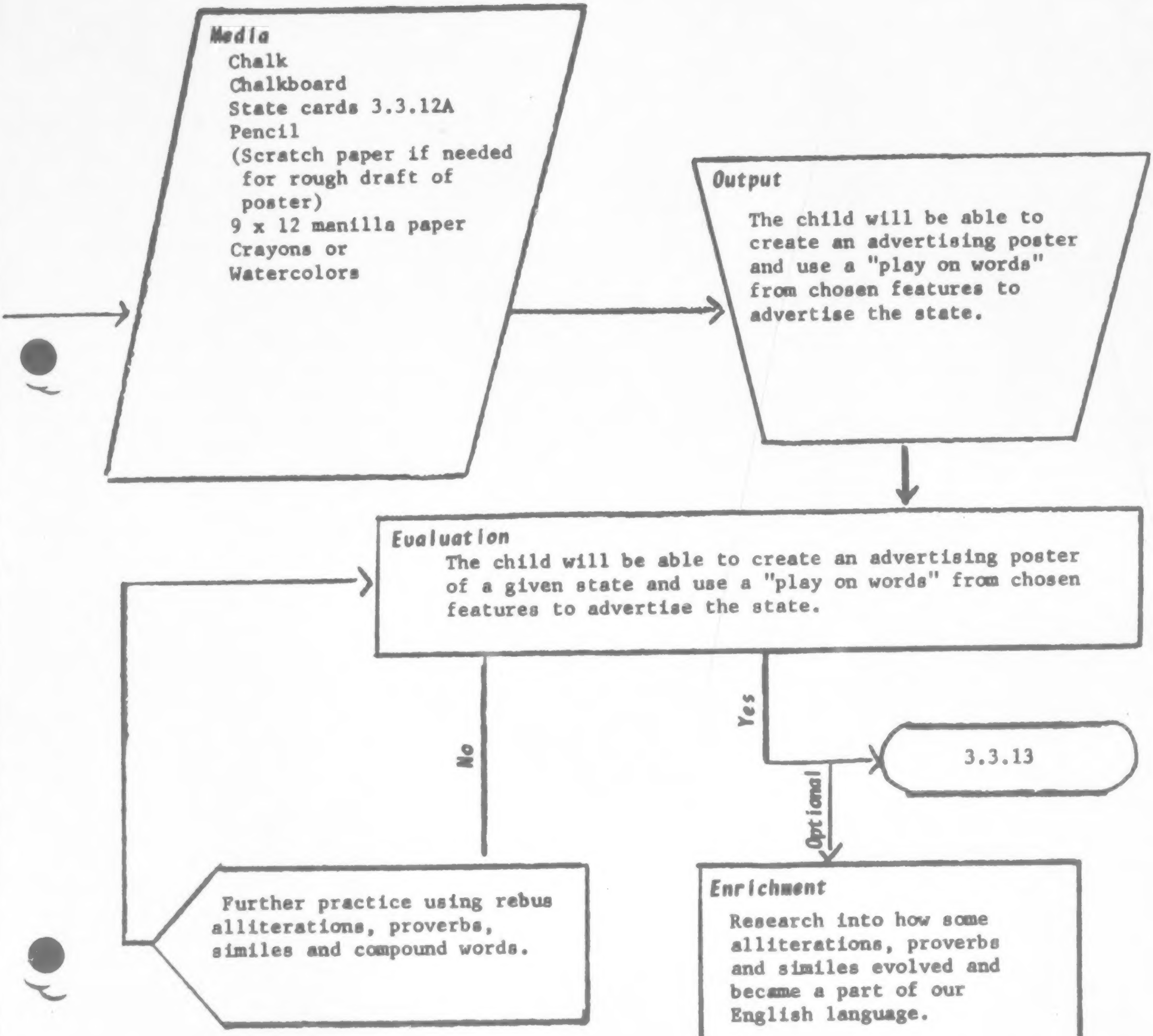
Come see the Wounded Knee
--Ouch, that smarts.

**Learning Opportunities**

I: The teacher distributes the state card and features to each child. (See 3.3.12.A)

A: The child selects about five features which he would be able to draw on a poster and advertise it with a catchy slogan in the form of "a play on words", rebus, simile, proverb, alliteration jingle or what not.

II: The teacher gives each child a 9 x 12 piece of manilla paper for his poster.



**Media**

Chalk
Chalkboard
State cards 3.3.12A
Pencil
(Scratch paper if needed for rough draft of poster)
9 x 12 manilla paper
Crayons or
Watercolors

**Output**

The child will be able to create an advertising poster and use a "play on words" from chosen features to advertise the state.

**Evaluation**

The child will be able to create an advertising poster of a given state and use a "play on words" from chosen features to advertise the state.

Further practice using rebus alliterations, proverbs, similes and compound words.

**Enrichment**

Research into how some alliterations, proverbs and similes evolved and became a part of our English language.

## Oregon

Mount Hood
Cascade Range
Coast Range
Blue Mountains
Steens Mountains
Upper Klamath, Malheuer and Summer Lakes
Crater Lake National Park
Columbia River
Willamette River
Snake River
Deschutes River
Oregon Caves National Monument
Hell's Canyon
Malheuer Bird Refuge
Pacific Ocean

## Utah

Zion Canyon National Park
Brice Canyon National Park
Timponogos Cave and Natural Bridges National Monument
Great Salt Lake
Bear River Refuge
Great Salt Lake Desert
Colorado River

## South Dakota

Mount Rushmore National Memorial
Black Hills
Badlands National Monument
Harney, Black Hills and Custer National Forests
Wind Cave National Park
South Dakota State Park
Dinosaur Park
Mitchell Corn Palace
Indian Burial Mounds
Missouri River

## Washington

Mount Ranier and Olympic National Parks
San Juan Islands
Chuckanut Drive
Dry Falls and Mount Spokane State Parks
Ginkgo Petrified Forest
Pacific Ocean
Columbia River
Snake River
Cascade Range
Rain Forest

## Texas

Brozos River
Rio Grande River
Big Bend National Park
Davis Mountains
Alamo
Colorado River
Pecos River
Gulf of Mexico

## Wyoming

Yellowstone and Grand Teton National Parks
Devils Tower National Monument
Gannett Peak
Big Horn Range
Absaroka Range
Medicine Bow Range
Laramie Range
Black Hills
North Platte, Big Horn, Green Snake
Wind and Belle Fourche Rivers
Yellowstone Lake
Pathfinder Lake
Jackson Lake
Thermopolis Hot Springs

## Arizona

Grand Canyon National Park
Painted Desert
Petrified Forest
Oak Creek Canyon
onument Valley
olorado River
Tumaccacori and San Xavier Missions
Casa Grande Ruins
Hopi and Navajo Indian Reservations
Roosevelt Dam
Lowell Observatory
Montezuma Castle
Meteor Crater
Colossal Cave
Natural Bridge
Hoover Dam
Lake Mead

## Florida

Everglades National Park (marshes)
West Palm Beach
Gulf of Mexico
Atlantic Ocean
Seminole Indians of South Florida
Sponge Fishing at Tarpon Springs
Frog and Alligator Farms
Mountain Lake Sanctuary
Everglades and Big Cypress Swamps
Ocala National Forest

## California

Mojave Desert
Pacific Ocean
Sierra Nevada Mountains
Spanish Missions
Yosemite National Park
Death Valley
Catalina Island
Hollywood
Disneyland
Sea World
Coastal Range

## Idaho

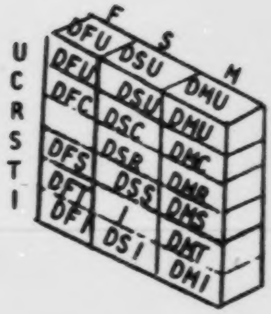
Rocky Mountains
Snake, Payette, Boise and Salmon Rivers
Shoshone Falls
Pend Oreille Lake
Coeur d'Alene Lake
Craters of the Moon National Monument
Sun Valley

## Colorado

Rocky Mountains
The Great Plains
High Plateaus
Arkansas River
Pikes Peak
Petrified Forest
Colorado River
Grand Lake
inosaur National Monument
Grand Sand Dunes National Monument
Royal Gorge

## Minnesota

Superior and Chippewa National Forests
Itasca State Park
Mississippi River
Red Lake
Lake of the Woods
Lake Minnetonka
Minnehahah Falls
Pipestone National Monument
Mayo Clinic
Red River Valley
Lake Superior



**Concept** Divergent Production

**Curricular Objective**

3.3.13 The child will be able to create his own crossword puzzle using unusual and clever clues.

**Input**

Discuss "originality" as something which is fresh and inventive. It is not copied from something else.

Explain to the class that they are going to be making their own crossword puzzles using alliterations, rebus, similes, compound words and proverbs. Review what each one of these is.

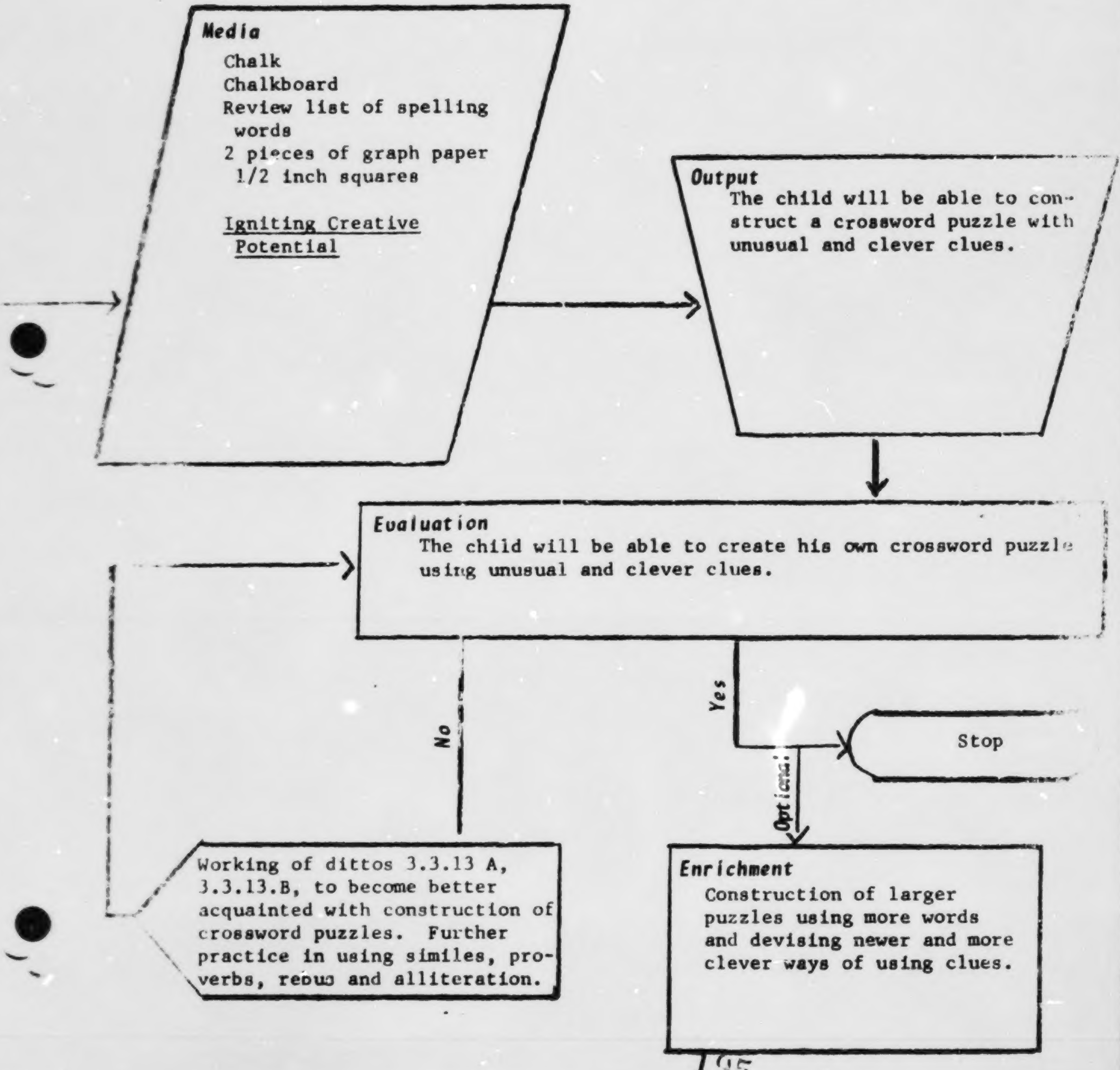
With the class, construct a crossword puzzle of about six words on the board--letting the children think up original clues for the words.

**Learning Opportunities**

I: The teacher will have the children select one review list of spelling words from their spelling books.

- A: The children are give 1/2 inch graph paper and asked to choose 10-12 words from the list and put them together in the form of a crossword puzzle.
- B: The clues are placed on the back in the form of alliterations, rebus, similes, proverbs or any other type of play on words.
- C: Given a second sheet of graph paper the child will make a pattern of the crossword puzzle form and the clues without the answers for someone else in the class to work.

II: The teacher should stress before the crosswrod puzzles are worked that divergent thinkers are good problem solvers and therefore should try to solve each clue without help from the author of the puzzle.



**Media**

Chalk
Chalkboard
Review list of spelling words
2 pieces of graph paper 1/2 inch squares

Igniting Creative Potential

**Output**

The child will be able to construct a crossword puzzle with unusual and clever clues.

**Evaluation**

The child will be able to create his own crossword puzzle using unusual and clever clues.

Working of dittos 3.3.13 A, 3.3.13.B, to become better acquainted with construction of crossword puzzles. Further practice in using similes, proverbs, rebus and alliteration.

**Enrichment**

Construction of larger puzzles using more words and devising newer and more clever ways of using clues.

Did you know that many letters of the alphabet can be spelled out?

The answer to 19-ACROSS is TEE, for the letter T.

| | | | | | | |
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| 1 | 2 | 3 | ■ | 4 | 5 | 6 |
| 7 | | | ■ | 8 | | |
| 9 | | | 10 | | | |
| ■ | ■ | ■ | | ■ | ■ | ■ |
| 11 | 12 | 13 | | 14 | 15 | 16 |
| 17 | | | ■ | 18 | | |
| 19 | | | ■ | 20 | | |

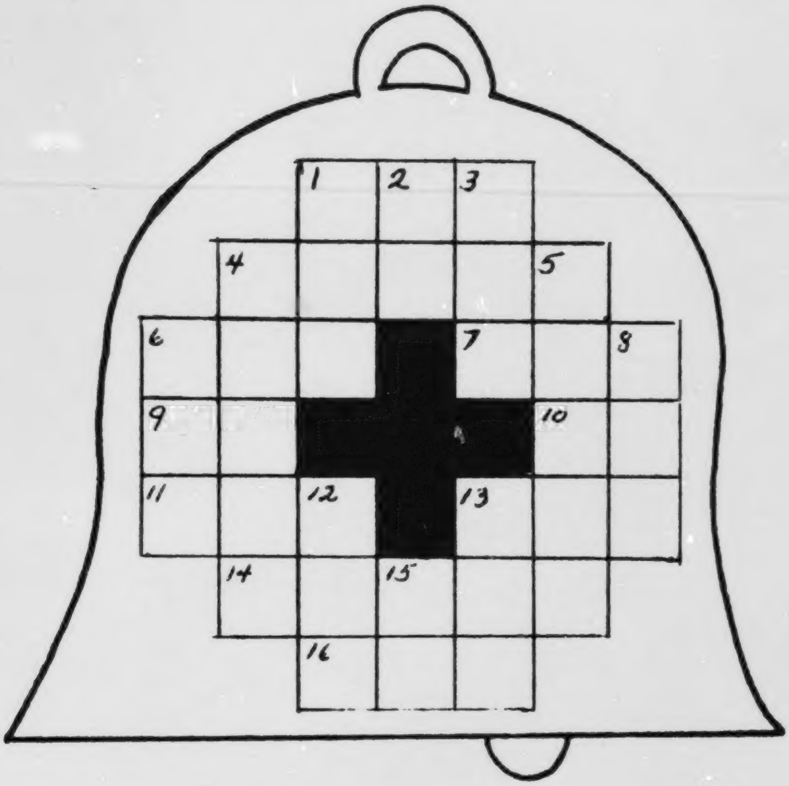
Definitions
ACROSS

1. PATRICIA, for short
4. First three letters of the alphabet
7. Adam's wife
8. Large body of water
9. He (or she) instructs you at school.
11. An elephant loves to eat these.
17. Bird that hoots at night
18. Tool used for cutting wood
19. 20th letter of the alphabet spelled out
20. Very large monkey

Definitions
DOWN

1. Teacher's favorite
2. Avenue: abbreviation
3. Drink served with chop suey
4. Part of a burned cigar
5. Insect that makes honey
6. Automobile
10. Food container made of tin
11. Cook soup in this.
12. A lamb's father is called a ram. What is a lamb's mother called?
13. Ginger ____, fizzy drink
14. United States of America: Abbreviation
15. Move your foot in time to the music.
16. _____et potatoes, part of Thanksgiving dinner

From Crosswords and Puzzles for Children, Dell Publishing Co., Inc.
New York, N. Y. 10017



### Definitions
### ACROSS

1. Cut the grass on the lawn
4. Dogs like to chew on these.
6. Number between nine and eleven.
7. Pitcher Seaver of the New York Mets
9. M____k, gift from a cow
10. "____ a good turn daily."
11. Santa's little helper
13. Meat often served with eggs
14. This word sounds like SAILS but is spelled differently.
16. What you get from sitting in the sun

### Definitions
### DOWN

1. First day of the school week: abbreviation
2. When you spell NO backward, what do you get?
3. What you are when you get rained on
4. Things that are shaped like this crossword
5. Ice-cream drinks
6. Nice gift for a man
8. She's married to Dad.
12. What you are when you weigh too much
13. This chicken lays eggs.
15. Fa, sol, ____, ti, do: notes of the scale

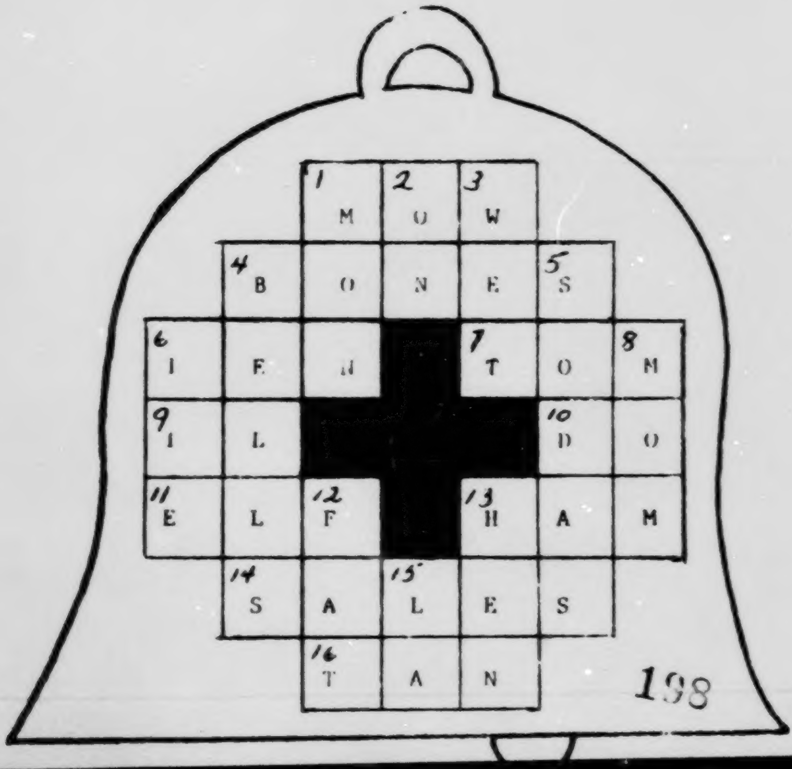
From Crosswords and Puzzles for Children, Dell Publishing Co., Inc.
New York, N. Y. 10017

# ANSWER SHEET

## 3.3.13.A

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 P | 2 A | 3 T | | 4 A | 5 B | 6 C |
| 7 E | V | E | | 8 S | E | A |
| 9 T | E | A | 10 C | H | E | R |
| | | | A | | | |
| 11 P | 12 E | 13 A | N | 14 U | 15 T | 16 S |
| 18 O | W | L | | 18 S | A | W |
| 19 T | E | E | | 20 A | P | E |

## 3.3.13.B



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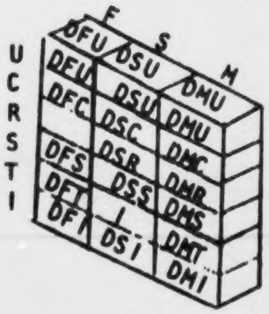
|---|---|---|---|---|---|---|
| | | 1 M | 2 O | 3 W | | |
| | 4 B | O | N | E | 5 S | |
| 6 I | E | N | | 7 T | O | 8 M |
| 9 I | L | | | | 10 D | O |
| 11 E | L | 12 F | | 13 H | A | M |
| | 14 S | A | 15 L | E | S | |
| | | 16 T | A | N | | |



**Concept** Divergent Production

**Curricular Objective**

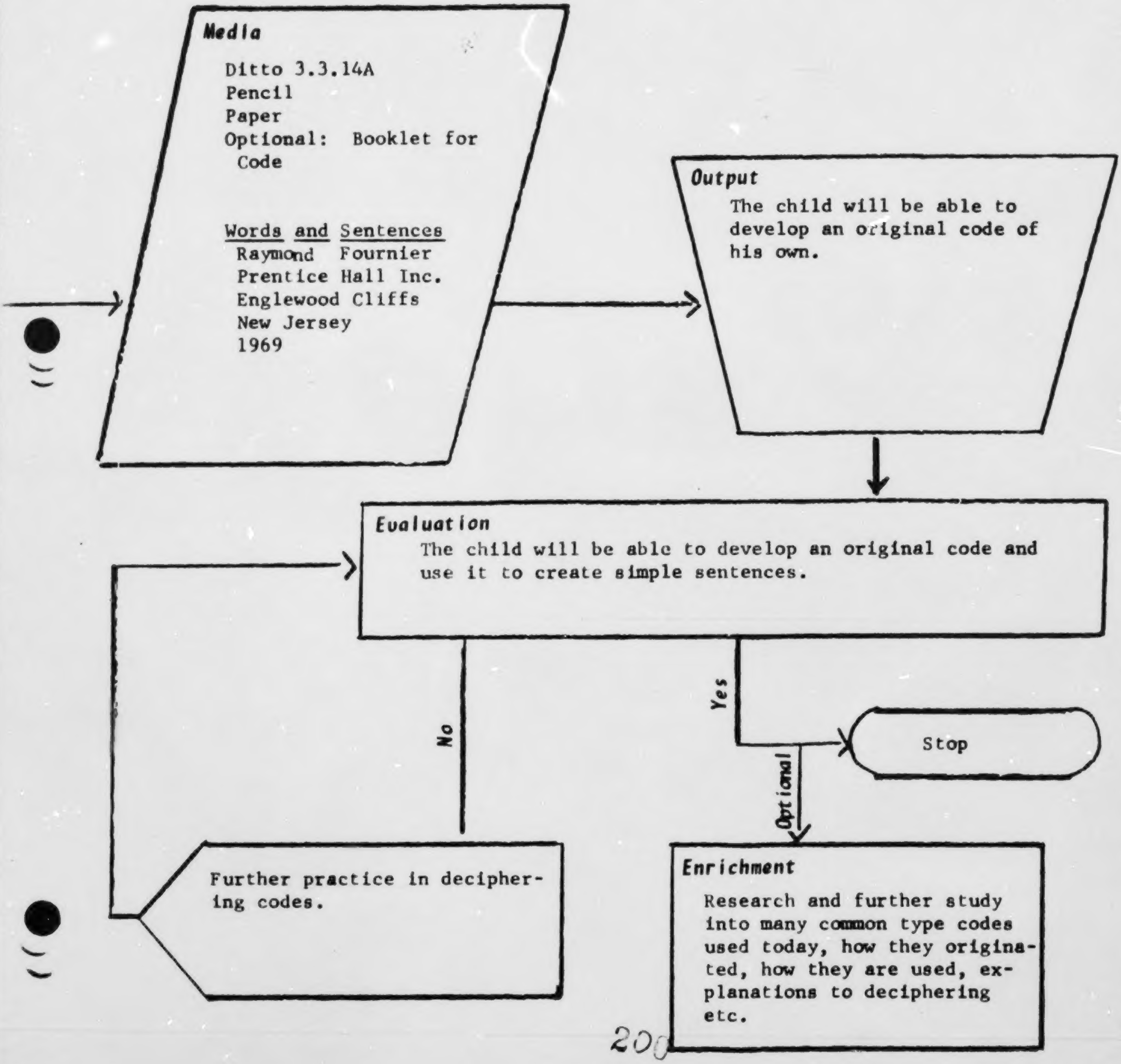
3.3.14 The child will be able to develop an original code and use it to create simple sentences.

**Input**

Present lessons 1.11 and 1.12 before using this lesson. Review the codes studied and reeemphasize the idea that our alphabet is a code as is our number system. Also stress the many other types of codes we use almost constantly in our daily lives. Let the children discuss some of the various ones we use.

**Learning Opportunities**

I: The teacher passes out the ditto (See 3.3.14A) and asks the children to create their own code.
  A: When the code has been devised the child may be asked to write a sentence, story or poem in his code.
  B: Children might be allowed to decipher each other's stories etc.
  C: The child might also like to make a little book using his code and illustrating it with pictures.



**Media**

Ditto 3.3.14A
Pencil
Paper
Optional: Booklet for Code

Words and Sentences
Raymond Fournier
Prentice Hall Inc.
Englewood Cliffs
New Jersey
1969

**Output**

The child will be able to develop an original code of his own.

**Evaluation**

The child will be able to develop an original code and use it to create simple sentences.

Further practice in deciphering codes.

**Enrichment**

Research and further study into many common type codes used today, how they originated, how they are used, explanations to deciphering etc.

## You can invent your own code

| a | b | c | d | e | f | g | h | i | j | k | l | m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |  |  |  |  |

| n | o | p | q | r | s | t | u | v | w | x | y | z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
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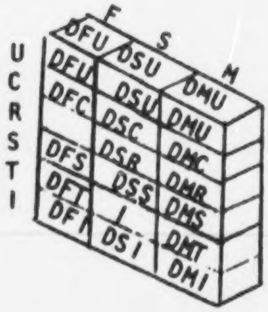
From Words and Sentences, By Raymond Fournier, Prentice Hall Inc. Publishers, Englewood Cliffs, New Jersey ©1969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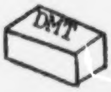
**Concept** Divergent Production

**Curricular Objective**

3.3.15 The child will be able to arrange cartoon frames in sequential order and supply original responses where the bleeps from the original cartoon have been cut away.



**Input**

Discuss originality.

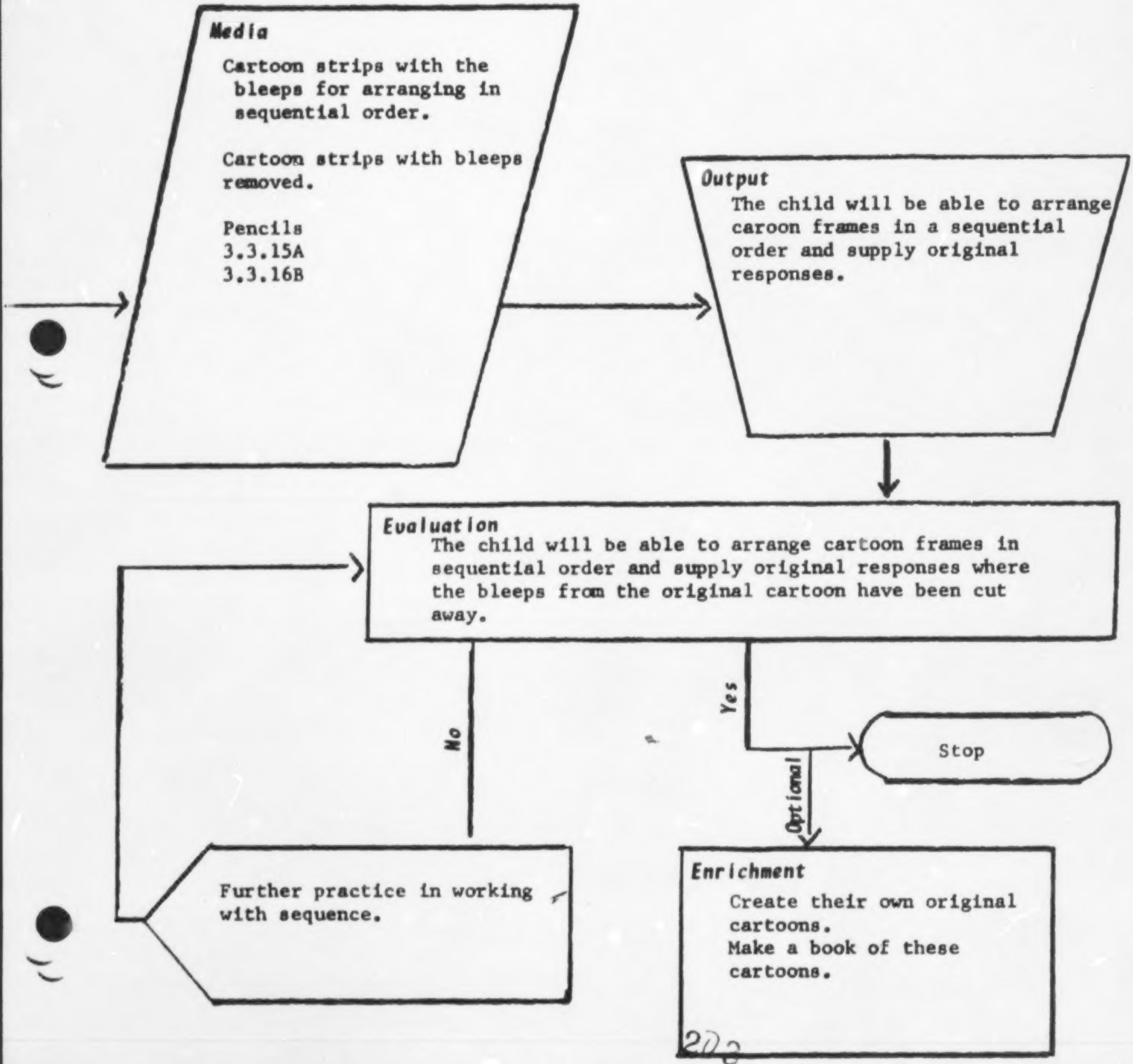
The children might be allowed to work with cartoons (see 3.3.15A) just arranging the frames in sequential order. Discuss with the children as to what a cartoon is, how it is constructed and how it builds up to a usually funny ending.

**Learning Opportunities**

I: The teacher distributes frames of a cartoon strip where bleeps have been removed to each child. (See 3.3.15B)

A: The child is asked to put them in an order which they feel would make a clever story.

B: They are asked to write in their own words for each bleep, trying to make it a humorous and clever cartoon.



**Media**

Cartoon strips with the bleeps for arranging in sequential order.

Cartoon strips with bleeps removed.

Pencils
3.3.15A
3.3.16B

**Output**

The child will be able to arrange caroon frames in a sequential order and supply original responses.

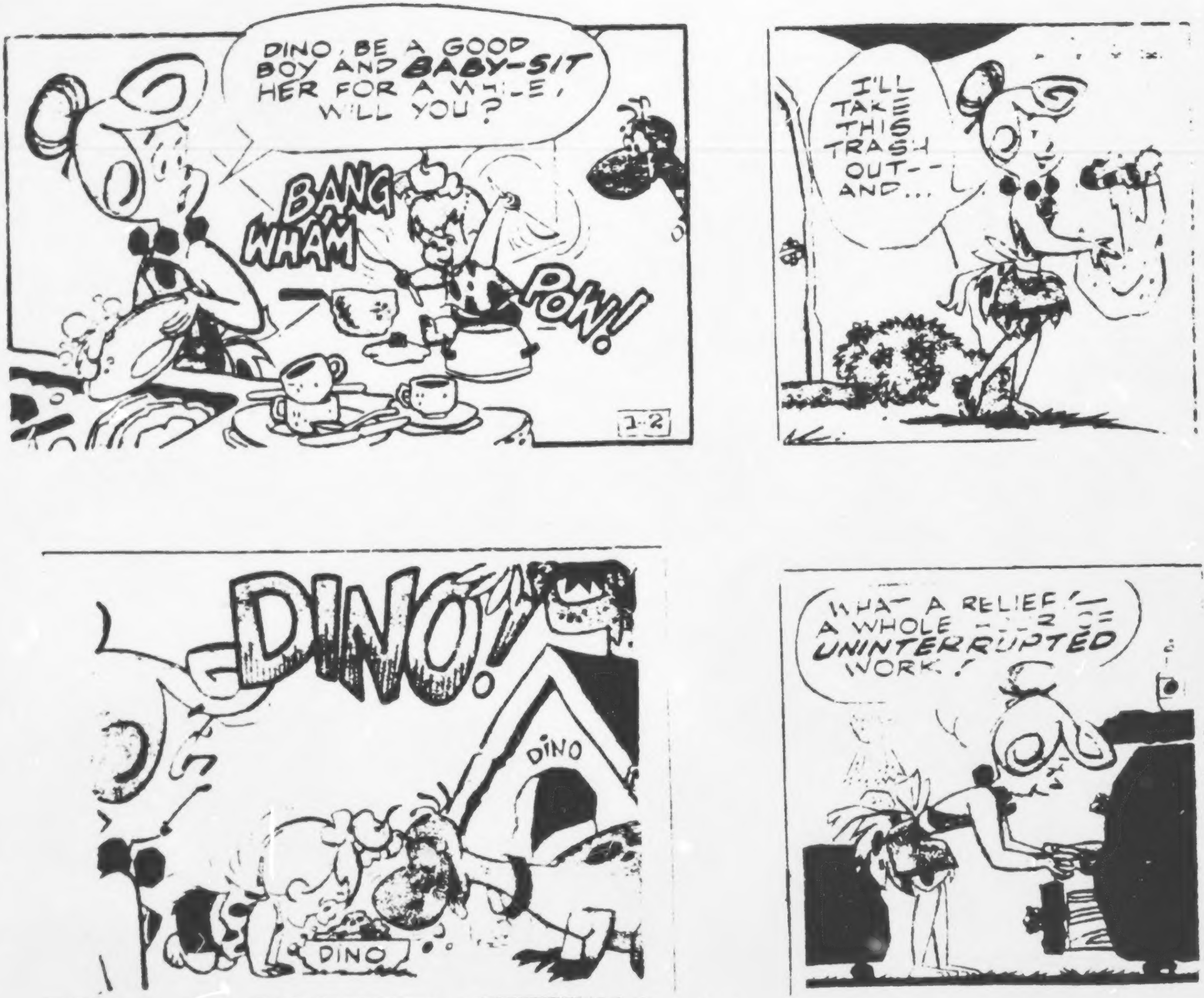
**Evaluation**

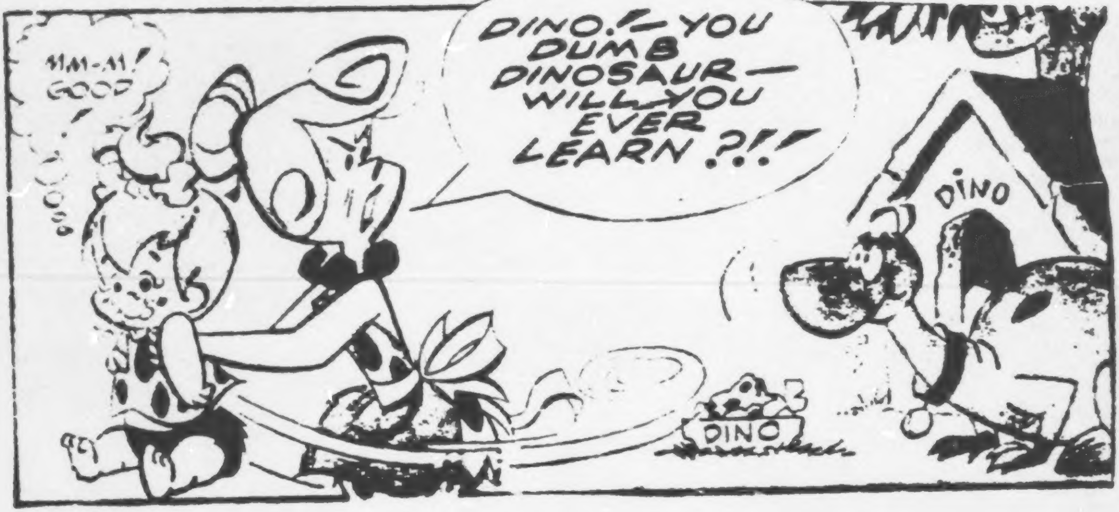
The child will be able to arrange cartoon frames in sequential order and supply original responses where the bleeps from the original cartoon have been cut away.

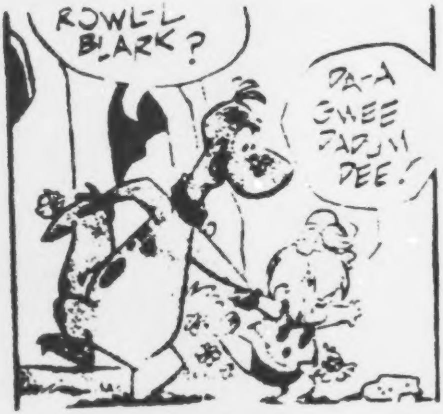
Further practice in working with sequence.

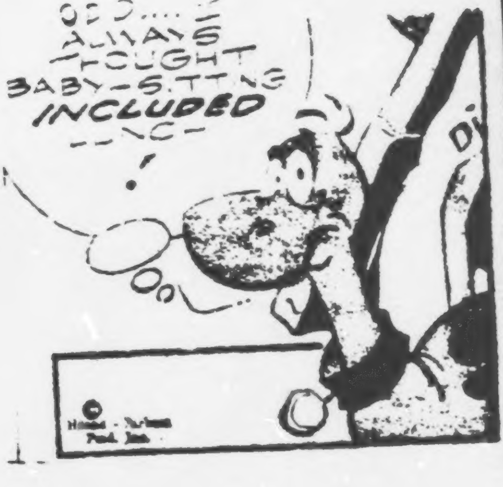
**Enrichment**

Create their own original cartoons.
Make a book of these cartoons.

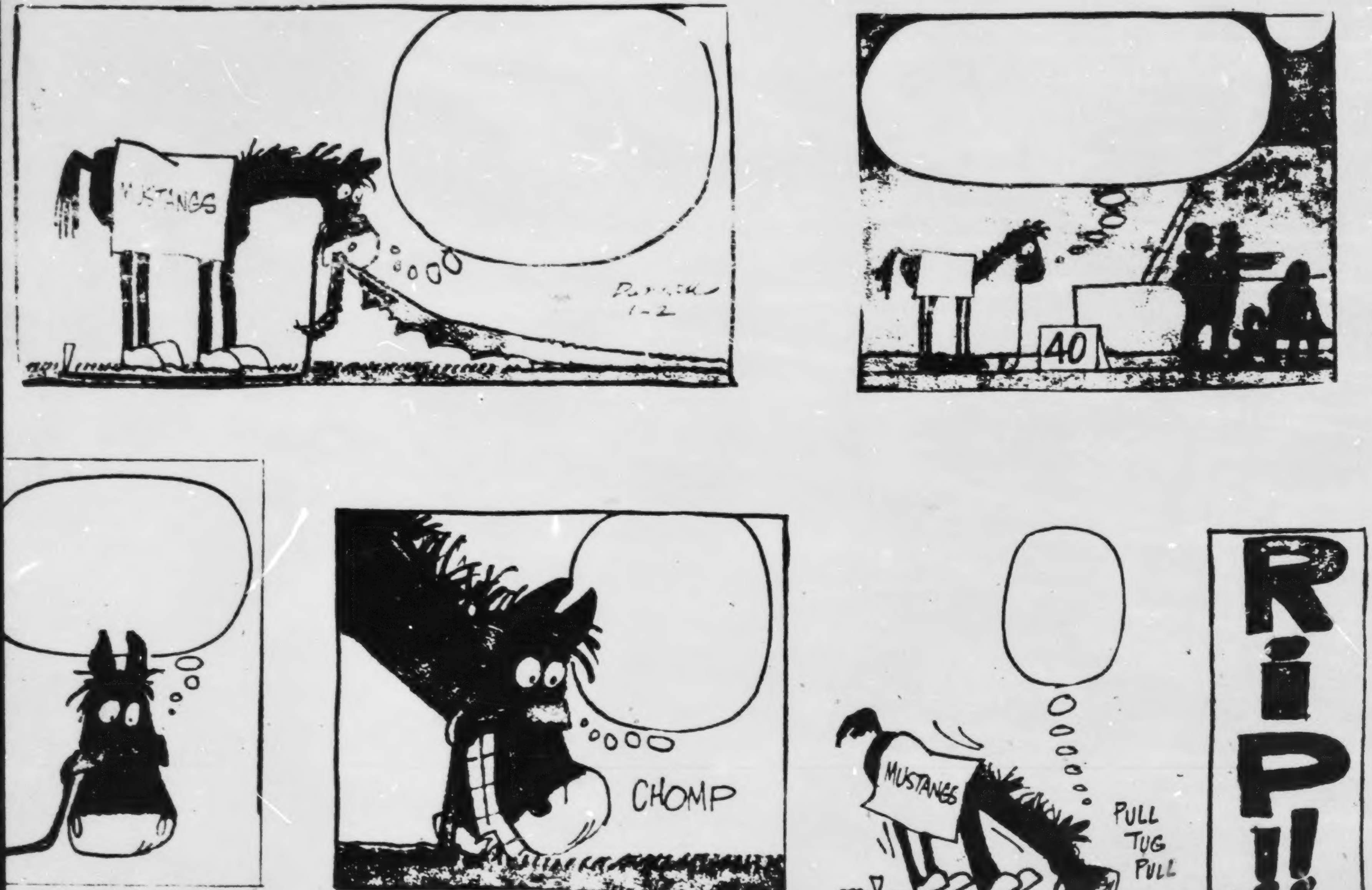

DINO, BE A GOOD BOY AND BABY-SIT HER FOR A WHILE, WILL YOU?
BANG
WHAM
POW!
1-2
I'LL TAKE THIS TRASH OUT-- AND...
DINO!
DINO
DINO
WHAT A RELIEF!— A WHOLE HOUR OF UNINTERRUPTED WORK!


MM-M! GOOD!
DINO!! — YOU DUMB DINOSAUR — WILL YOU EVER LEARN ?!!
DINO
DINO


ROWL-L BLARK?
DA-A GWEE DADUM DEE!

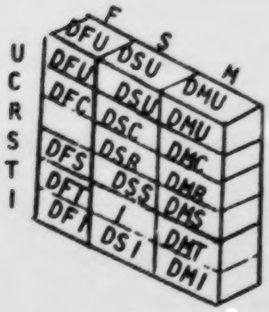

ODD... I ALWAYS THOUGHT BABY-SITTING INCLUDED LUNCH!
DI

© Hanna - Barbera Prod. Inc.



MUSTANGS
1-2
40
CHOMP
MUSTANGS
PULL
TUG
PULL
RIP!!

3.3.15.C



**Concept** Divergent Production

**Curricular Objective**

3.3.16 The child will be able to create a new and unusual game to be played on a baseball diamond.

**Input**

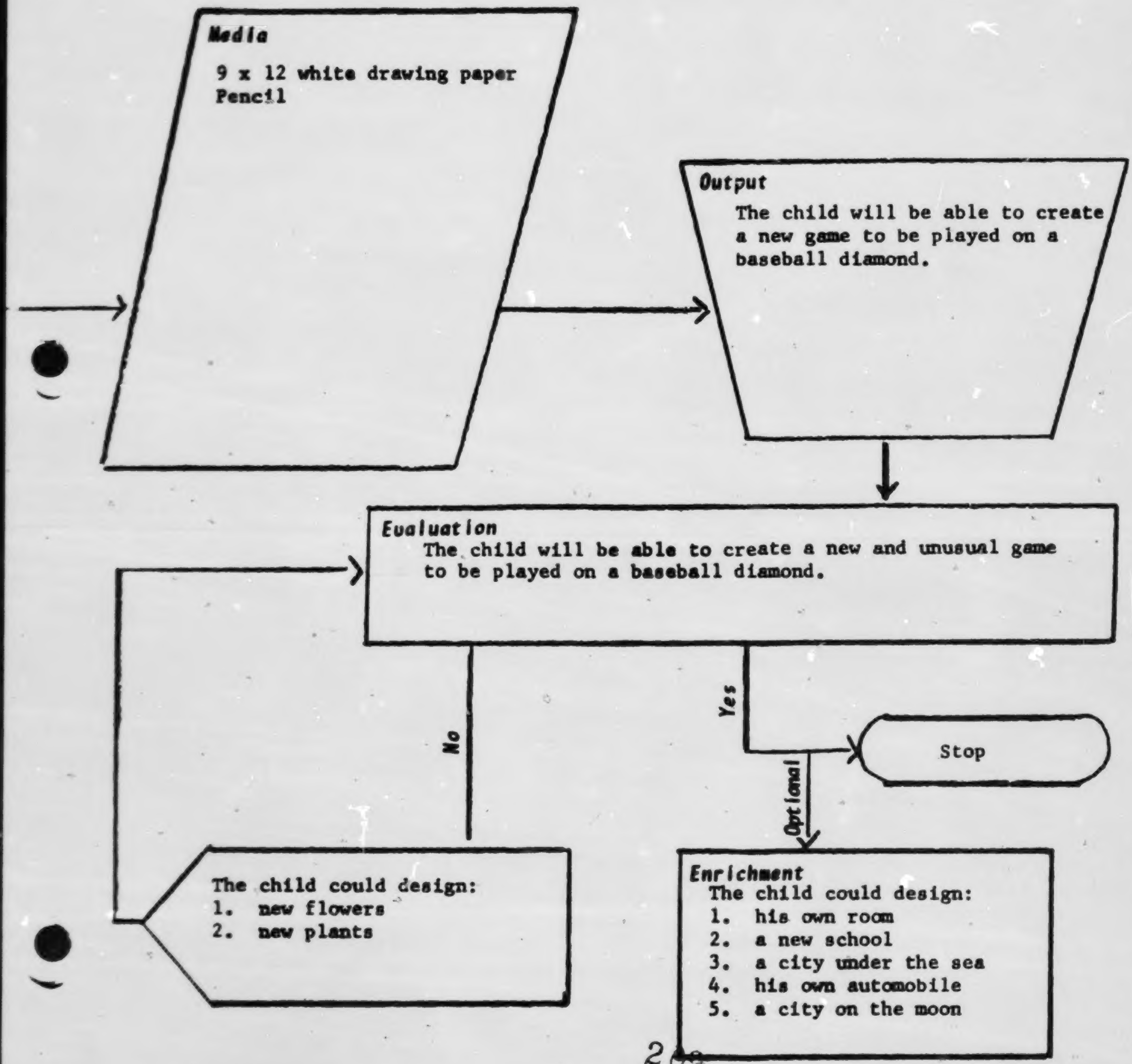
Discuss one or two sports which require certain areas of play such as football and basketball.

**Learning Opportunities**

I: The teacher discusses with the children other games that could be played on these areas.

II: Ask the children to try to think up games which have never been invented to play on these areas.
  A: Illicit oral responses from as many as can think them up.

III: The teacher distributes a piece of 9 x 12 white drawing paper to each child.
  A: The children are asked to design their own game which could be played on a baseball diamond.



**Media**

9 x 12 white drawing paper
Pencil

**Output**

The child will be able to create a new game to be played on a baseball diamond.

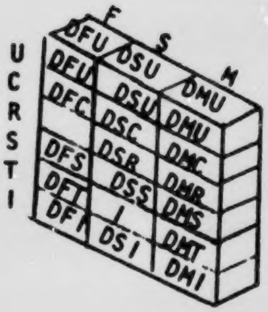
**Evaluation**

The child will be able to create a new and unusual game to be played on a baseball diamond.

The child could design:
1. new flowers
2. new plants

**Enrichment**

The child could design:
1. his own room
2. a new school
3. a city under the sea
4. his own automobile
5. a city on the moon



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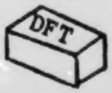
**Concept** Divergent Production

**Curricular Objective**

3.3.17 The child will be able to create many different and unusual flower shapes.

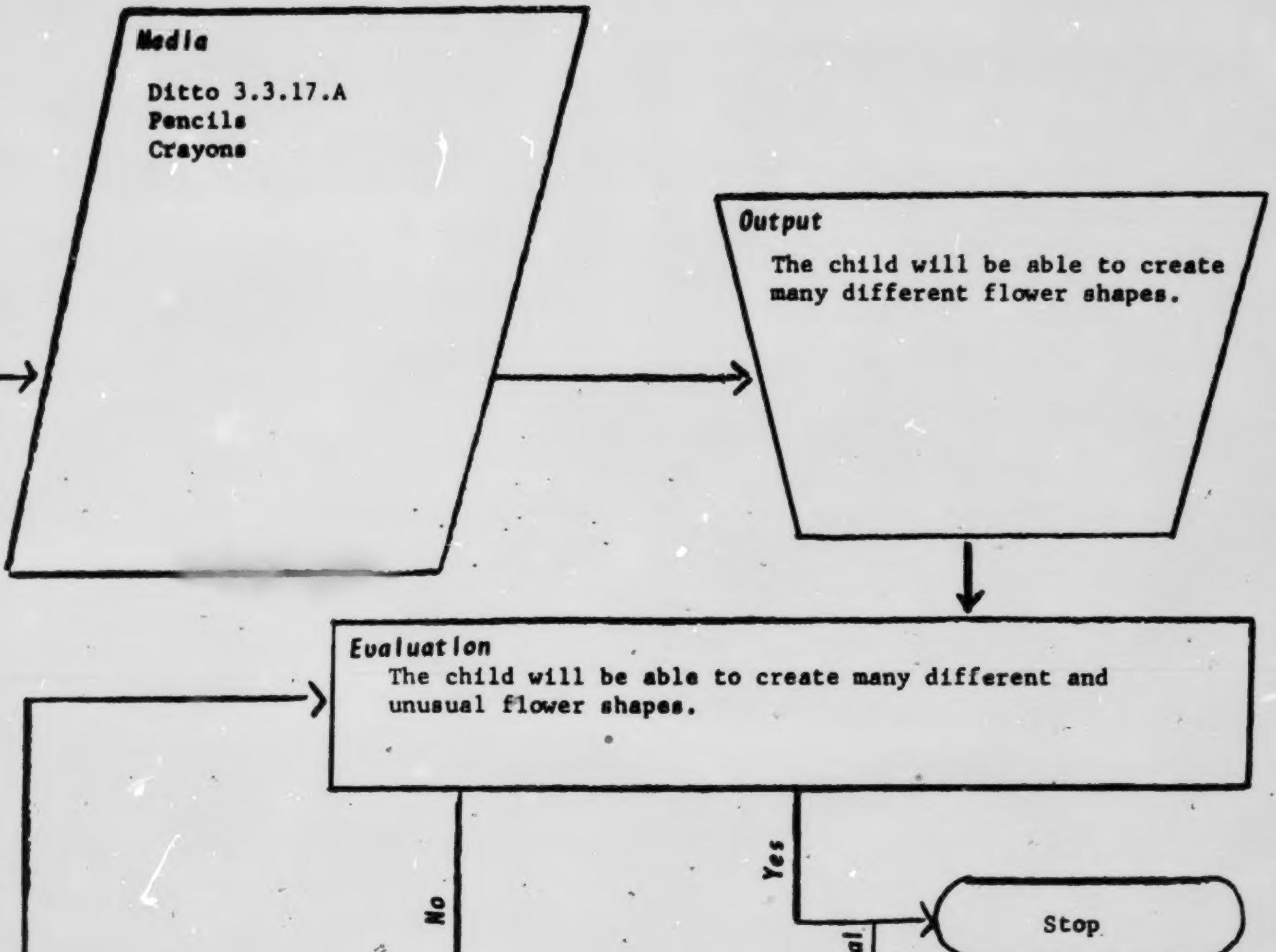


**Input**

Discuss originality and the idea of each plant and flower being original creations.

**Learning Opportunities**

I: The teacher distributes ditto (see 3.3.17.A) to each child.
- A: She explains to the class, You are going to create a flower--one that has never been seen before."
- B: "Draw all the shapes or designs for a flower that you can imagine. You may have more paper when needed."
- C: Encourage them by saying, "You have never seen one like it before; you're the creator, the originator."



**Media**

Ditto 3.3.17.A
Pencils
Crayons

**Output**

The child will be able to create many different flower shapes.

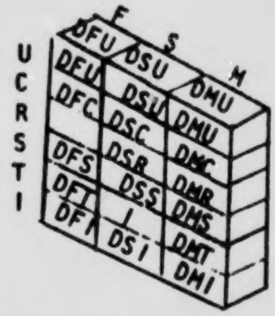
**Evaluation**

The child will be able to create many different and unusual flower shapes.

The child could be assigned the task of designing one or two new type flowers

**Enrichment**

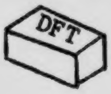
The child may design new shrubs, trees, or ground covers.



**Concept** Divergent Production

**Curricular Objective**

3.3.18 The child will be able to create an imaginary animal using the attributes of land animals.



**Input**

Review the meaning of attributes. Instruct the class to think of attributes of a dog.

The teacher lists the attributes on the chalkboard.

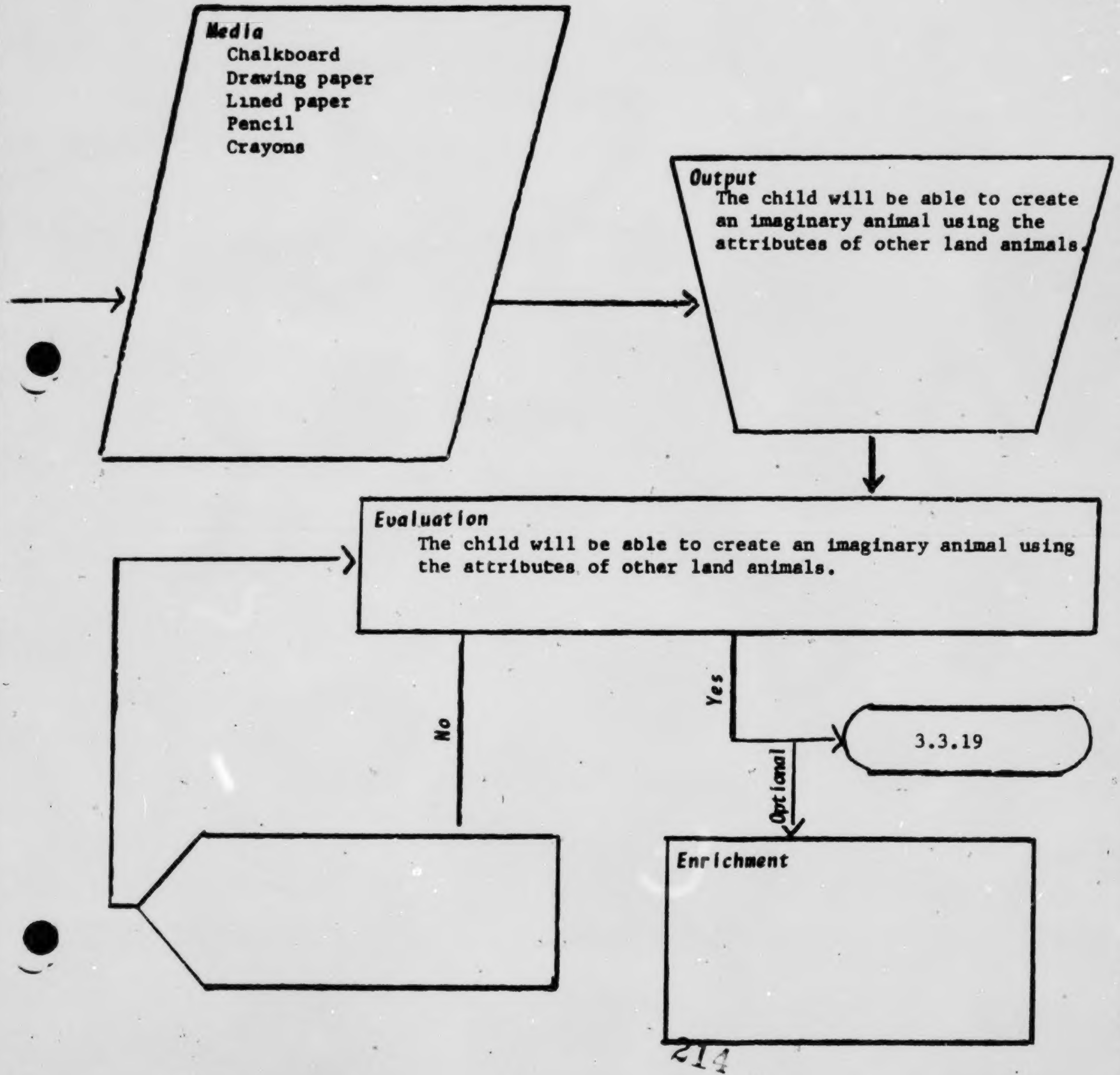
**Learning Opportunities**

I: Distributing drawing paper to each child, the teacher instructs them to rearrange the attributes of the dog to create an animal that is unique and creative.

II: On a piece of lined paper the child is asked to list as many animals as they can think of that live on land.

III: Distributing 12 x 9 drawing paper to each child, the teacher asks them to create the most unusual animal they can think of by using attributes from animals on their list.

A: They are to give their new animal an exciting and unusual name.



**Media**

- Chalkboard
- Drawing paper
- Lined paper
- Pencil
- Crayons

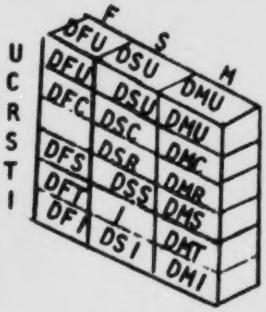
**Output**

The child will be able to create an imaginary animal using the attributes of other land animals.

**Evaluation**

The child will be able to create an imaginary animal using the attributes of other land animals.

**Enrichment**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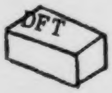
**Concept** Divergent Production

**Curricular Objective**

3.3.19 The child will be able to create an original make-believe land for an imaginary animal



**Input**

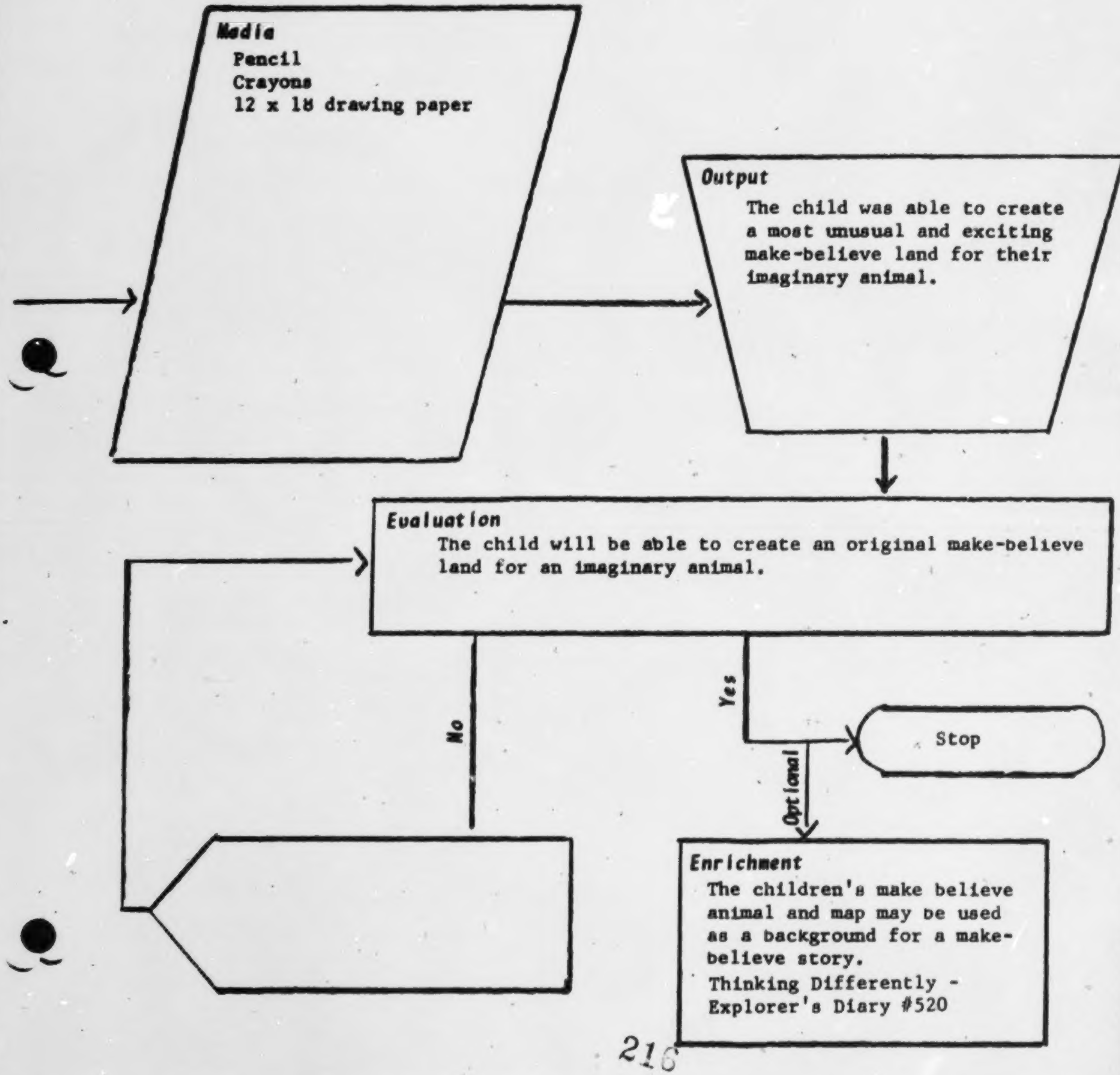
Following completion of the imaginary animal in lesson 3.3.18 the teacher instructs the class they must give him a place to live.

Discuss briefly the basic needs of any animals (ie: food, shelter and water).

**Learning Opportunities**

I: The teacher instructs the child to make their land as exciting and creative as possible that even they might like to come and live there.
  A: Discuss as to who might make their lands exciting.

II: Distribute 12 x 8 drawing to each child.
  A: They are asked to draw a map of their make-believe country, naming rivers, mountains, cities, etc.
  B: Each child is to give their country a very clever and unusual name.



**Media**

Pencil
Crayons
12 x 18 drawing paper

**Output**

The child was able to create a most unusual and exciting make-believe land for their imaginary animal.

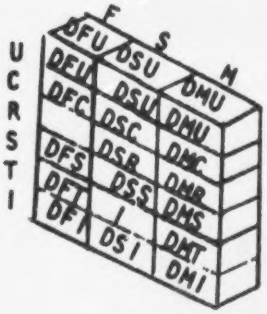
**Evaluation**

The child will be able to create an original make-believe land for an imaginary animal.

**Enrichment**

The children's make believe animal and map may be used as a background for a make-believe story.

Thinking Differently - Explorer's Diary #520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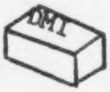
**Concept** Divergent Production

**Curricular Objective**

3.4.1 The child will be able to transform the meanings of compound words into clever or unusual responses.



**Input**

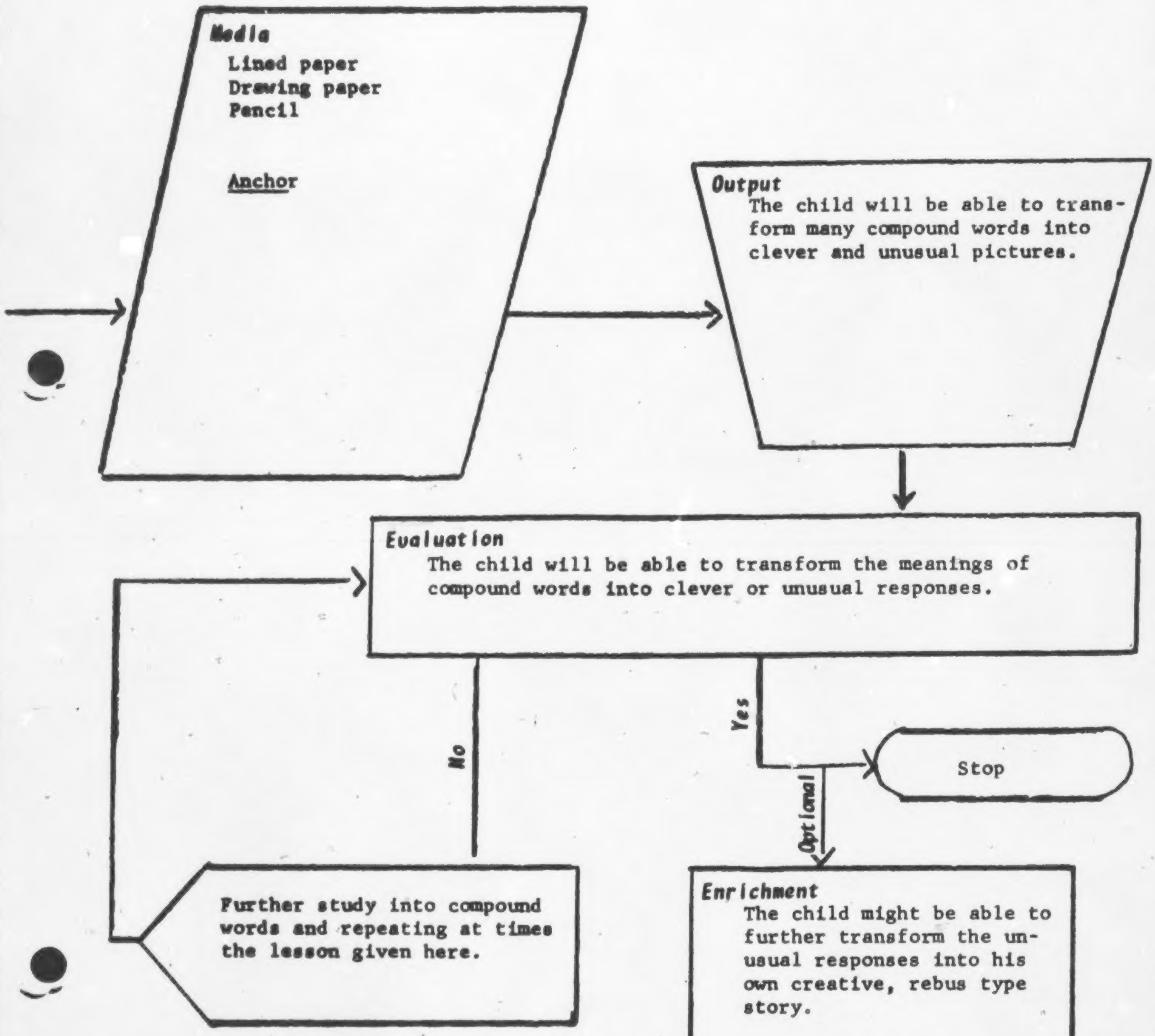
Discuss compound words. Point out that often these words can bring two different meanings to mind--such as "housefly" as an insect and a house that can fly.

**Learning Opportunities**

I: The teacher asks the children to list on a paper as many compound words as they can think of in 10 minutes.

A: The children are asked to pick 4 to 8 of the words which could have clever, double meanings.

B: On a paper which has been folded into fourths or eighths, the child is asked to illustrate the absurd meaning the words bring to mind.



**Media**

Lined paper
Drawing paper
Pencil

Anchor

**Output**

The child will be able to transform many compound words into clever and unusual pictures.

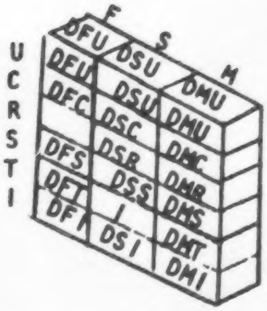
**Evaluation**

The child will be able to transform the meanings of compound words into clever or unusual responses.

Further study into compound words and repeating at times the lesson given here.

**Enrichment**

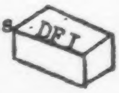
The child might be able to further transform the unusual responses into his own creative, rebus type story.



***Concept*** Divergent Production

***Curricular Objective***

3.4.2 The child, when given an advertisement cut from the yellow pages of a telephone book, will be able to design an original idea on how to improve the product shown in the ad.



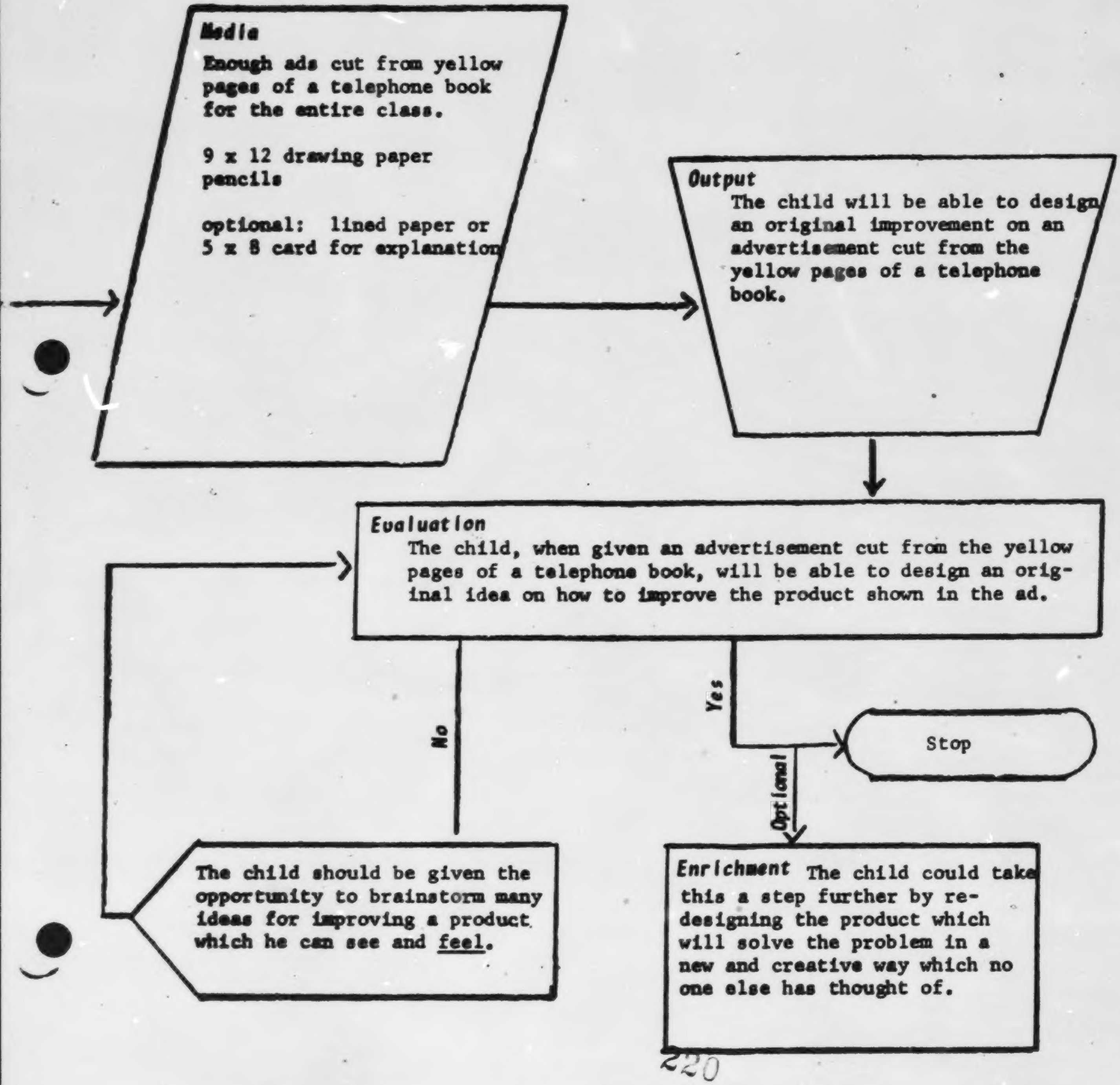
***Input***

Discuss the term elaboration with the class. It is to embellish upon an idea or a response to make it more elegant.

Work through the improvement of an object such as a lawnmower with the entire class. Let the children give their ideas on how it could be improved to make it easier to handle and more efficient in cutting grass.

***Learning Opportunities***

I: Distribute ads, cut from the yellow pages of a telephone book, to each child.
  A: Give each child a piece of 9 x 12 white drawing paper on which they may draw their object with the improvement shown.
  B: A brief explanation should be included under the drawing or it could be written on a separate piece of paper or 5 x 8 card to accompany the design.



**Media**

Enough ads cut from yellow pages of a telephone book for the entire class.

9 x 12 drawing paper
pencils

optional: lined paper or 5 x 8 card for explanation

**Output**

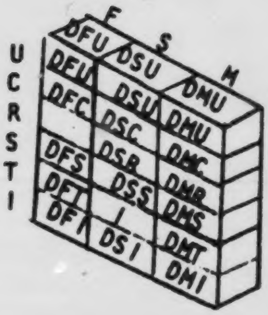
The child will be able to design an original improvement on an advertisement cut from the yellow pages of a telephone book.

**Evaluation**

The child, when given an advertisement cut from the yellow pages of a telephone book, will be able to design an original idea on how to improve the product shown in the ad.

The child should be given the opportunity to brainstorm many ideas for improving a product which he can see and feel.

**Enrichment** The child could take this a step further by re-designing the product which will solve the problem in a new and creative way which no one else has thought of.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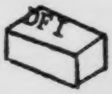
**Concept** Divergent Production

**Curricular Objective**

3.4.3 The child will be able to design a picture with the use of gummed notebook rings.



**Input**

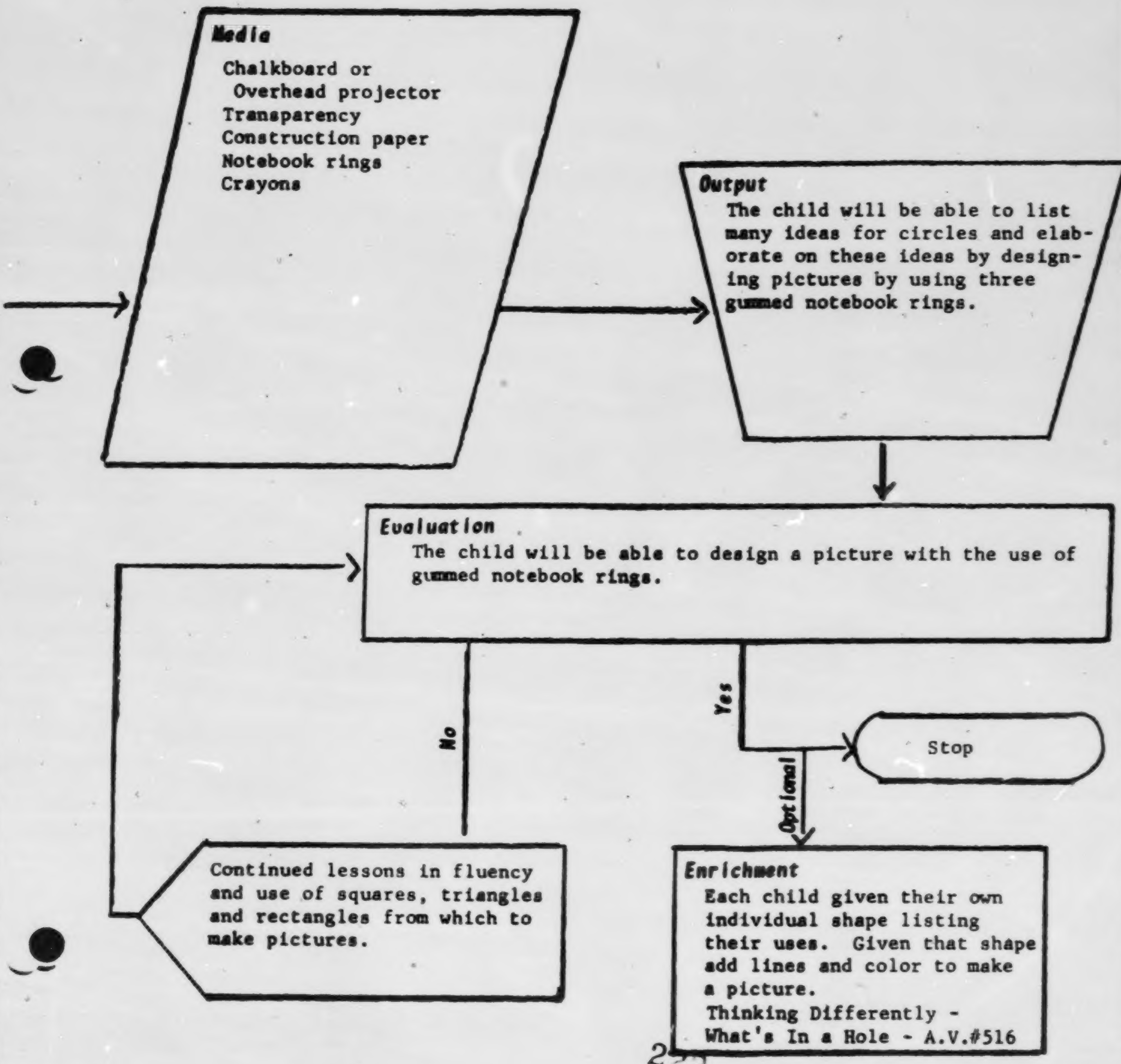
Review the idea of fluency with the children.

**Learning Opportunities**

I: Draw a circle on the chalkboard or use overhead projector.
  A: Ask the children to name all the things they can think of that a circle could be.
  B: List these on the chalkboard.

II: Draw a doughnut type circle on the chalkboard.
  A: Develop a list of objects that this might be.

III: The teacher will distribute a piece of construction paper and three gummed notebook rings to the children.
  A: The children are to place the gummed labels anywhere on the paper and add color or lines to the rings to complete a design or picture.



**Media**

Chalkboard or
Overhead projector
Transparency
Construction paper
Notebook rings
Crayons

**Output**

The child will be able to list many ideas for circles and elaborate on these ideas by designing pictures by using three gummed notebook rings.

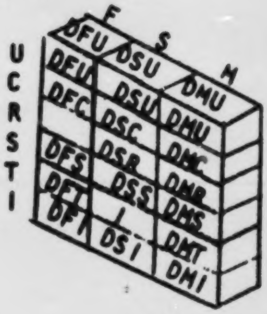
**Evaluation**

The child will be able to design a picture with the use of gummed notebook rings.

Continued lessons in fluency and use of squares, triangles and rectangles from which to make pictures.

**Enrichment**

Each child given their own individual shape listing their uses. Given that shape add lines and color to make a picture.
Thinking Differently -
What's In a Hole - A.V.#516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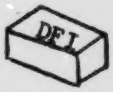
**Concept** Divergent Production

**Curricular Objective**

3.4.4 The child will be able to improve a given idea or object contained in a nursery rhyme.



**Input**

Discuss idea of elaboration and the advantage of being an original thinker.

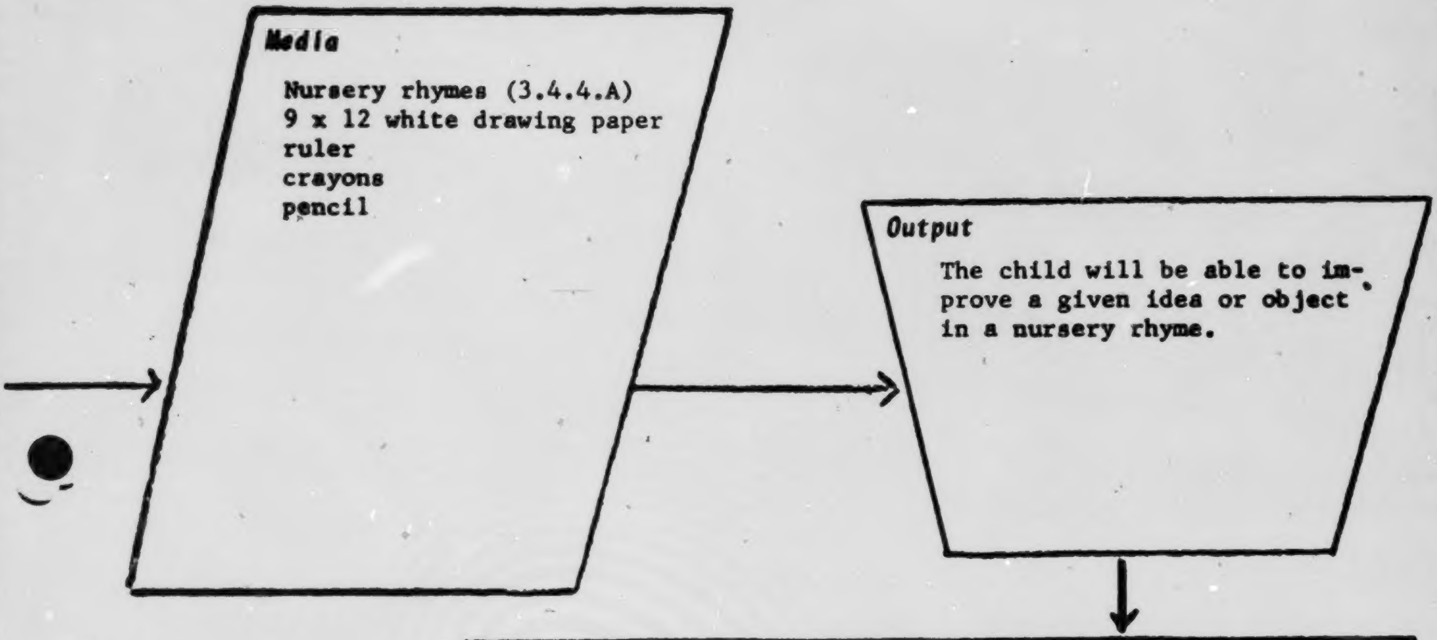
Review familiar nursery rhymes.

Tell children they are to improve a given object in a rhyme.

Encourage children to think through instructions and to come up with their own original ideas to solve the problem.

**Learning Opportunities**

I: The teacher distributes a piece of 9 x 12 paper to each child.
- A: Each child is given a nursery rhyme (See 3.4.4.A) with instructions below it on what to improve.
- B: At end of period share improvements with the class.
- C: Teacher may want class to guess what rhymes were given each child.



**Media**

Nursery rhymes (3.4.4.A)
9 x 12 white drawing paper
ruler
crayons
pencil

**Output**

The child will be able to improve a given idea or object in a nursery rhyme.

**Evaluation**

The child will be able to improve a given object or idea contained in a nursery rhyme.

**Enrichment**

The idea might be developed to longer poems such as the wl and the Pussycat, or even nto larger ideas contained n fairy tales and such.

Rub-a-dub-dub, three men in a tub
And who do you think they be?
The butcher, the baker, the candlestick maker'
Turn 'em out, knaves all three!

**Design a new tub for the three men in the tub for them to sail in it comfortably for a few days.**

There was an old woman who lived in a shoe
She had so many children she didn't know what to do'
She gave them some broth without any bread;
She whipped them all soundly and put them to bed.

**Design a new shoe for the Old Woman in the shoe so her family is more comfortable.**

Jack and Jill went up the hill
To fetch a pail of water.
Jack fell down and broke his crown
And Jill came tumbling after.

Up Jack got and home he did trot
As fast as he could caper.
He went to bed to mend his head
In venegar and brown paper.

Design a new type pail for Jack and Jill which is easier to carry and will hold more than water.

Pussy Cat, Pussy Cat,
Where have you been?
I've been to London,
To visit the Queen.

Pussy Cat, Pussy Cat,
What did you there?
I frightened the little mouse
Under the chair.

**Design a new chair in which the mouse may hide comfortably and for a long time from the cat.**

Little Miss Muffet
Sat on a tuffet,
Eating of curds and whey;
There came a big spider,
And sat down beside her,
And frightened Miss Muffet away.

Design a new type tuffet to make Miss Muffet more comfortable.

Mary, Mary, quite contrary,
How does your garden grow?
Silver bells and cockle-shells,
And pretty maids all in a row.

Design Mistress Mary's contrary garden so that it grows something other than flowers.

Hey, diddle, diddle!
The cat and the fiddle,
The cow jumped over the moon;
The little dog laughed
To see such sport,
And the dish ran away with the spoon.

Design a new instrument for the cat to play instead of the fiddle.

Little Boy Blue, come blow your horn;
The sheep's in the meadow, the cow's in the corn.
Where's the little boy that looks after the sheep?
He's under the haystack, fast asleep.

Design a new horn for Little Boy Blue so that it can do more than blow.

Peter, Peter Pumpkin Eater,
Had a wife and couldn't keep her;
Put her in a pumpkin shell,
And there he kept her very well.

Design a comfortable pumpkin shell for Peter Pumpkin eater's wife.

Hickory, dickory, dock!
The mouse ran up the clock;
  The clock struck one,
  And down he run,
Hickory, dickory, dock!

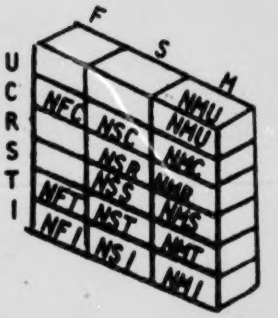
Design a new clock for the mouse so that it is easier to run up and down.

Pease porridge hot
  Pease porridge cold,
Pease porridge in the pot,
  Nine days old.
Some like it hot,
  Some like it cold,
Some like it in the pot,
  Nine days old.

Design a new pot to cook the porridge in.

Ding, dong, bell!
Pussy's in the well!
  Who put her in?
Little Johnny Green.
  Who pulled her out?
Little Johnny Stout

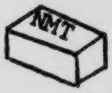
Design a new well for pussy so he could have gotten out by himself.



**Concept** Convergent Production

**Curricular Objective**

4.1 The child will be able to interpret the meaning of those proverbs presented to him.



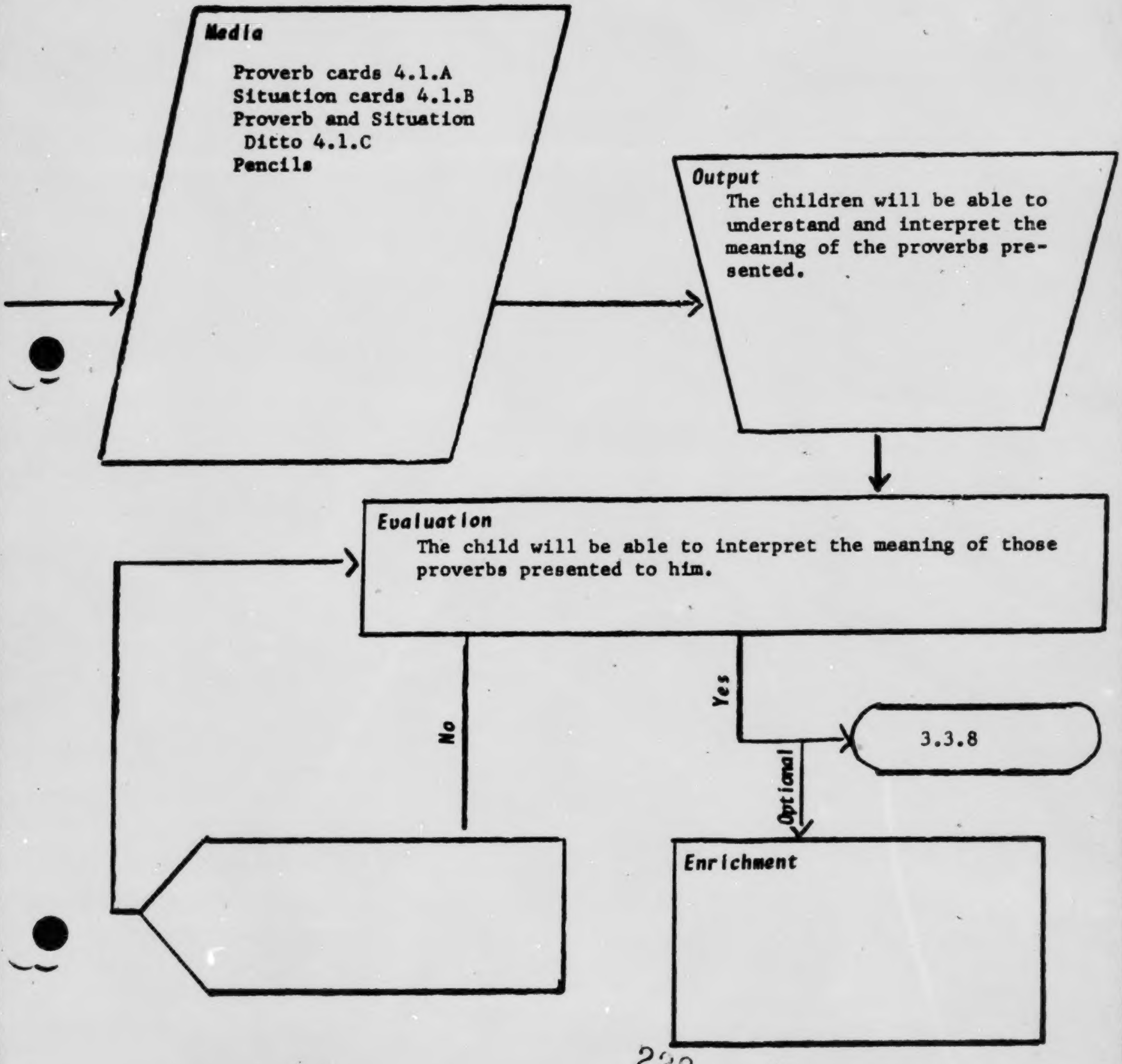
**Input**

Discuss the fact that proverbs have evolved within the English language over many years, that they are popular sayings expressing a truth or moral.

**Learning Opportunities**

I: The teacher divides the class evenly into teams.
   A: Matching situation cards and proverb cards are placed on various tables according to the number of players per team. (See 4.1.A & 4.1.B)
   B: The situation and proverb cards which match are given the identical number. The situation card number is covered with a slip of paper and paperclips.
   C: Teams are placed at the various tables.
   D: Each member is to read a situatio card and match it to the correct proverb.
   E: Teams may discuss the cards together if needed.
   F: At the end of 3 minutes time is called and players remove the paperclip and paper from the situa tions for correcting.
   G: Ten points per team is given for each correct match.
   H: Teams move onto the other tables until they return to starting table.
   I: Highest score wins.

II: Teacher hands out ditto with proverbs where children are to match situations with the correct proverb. (See 4.1.C)



**Media**

Proverb cards 4.1.A
Situation cards 4.1.B
Proverb and Situation Ditto 4.1.C
Pencils

**Output**

The children will be able to understand and interpret the meaning of the proverbs presented.

**Evaluation**

The child will be able to interpret the meaning of those proverbs presented to him.

**Enrichment**

4.1.A

1. LOOK BEFORE YOU LEAP

2. HASTE MAKES WASTE

3. WASTE NOT WANT NOT

4. DON'T CRY OVER SPILLED MILK

5. THE EARLY BIRD CATCHES THE WORM

6. A STITCH IN TIME SAVES NINE

7. A FOOL AND HIS MONEY ARE SOON PARTED

8. HE WHO HESITATES IS LOST

9\.

EVERY CLOUD HAS A SILVER LINING

10\.

NOTHING VENTURED, NOTHING GAINED

11\.

EVERYTHING COMES TO HIM WHO WAITS

12\.

DON'T COUNT YOUR CHICKENS BEFORE THEY'RE HATCHED

13\.

DON'T CROSS YOUR BRIDGES UNTIL YOU COME TO THEM

14\.

ALL'S WELL THAT ENDS WELL

15\.

CURIOSITY KILLED THE CAT

4.1.B

(1) Johnny was on his way home from school. He remembered what the teacher said during a safety lesson that day. Look both ways before you cross the street. Watch the signal light to see if it is your turn to walk across the crosswalk. Upon coming to the intersection he saw the light told him it was time to cross. He looked both ways before stepping off the curb to cross.

(2) Linda did not get out of bed when her mother called her to tell her it was time to get ready for school. By not getting up on time, she had to hurry and dress, she gulped down her breakfast and dashed off to school. Upon arriving at school she found she had forgotten her lunch, her math book and homework which was due that day. She tried calling home, but no one was there.

(3) Jimmy was having fun at home putting his model airplane together. He had bought some glue just for this job. He was gluing the pieces together but he did not pay any attention to how much glue he was using. He wanted to make sure everything stuck together well. When he had just a few more pieces to put together he found he had run out of glue.

(4) The class had made up their own play and was giving it to another class. The scenery had taken a long time to make. Mary and Bob were to walk on stage. Mary was to pretend she was cooking on a stove, Bob to sit at the table talking to her. As they both entered on stage Mary slipped knocking into Bob. Bob fell into the table knocking it over and most of the other furniture. It also tore some of the scenery. After the play and back in the classroom Mary began to cry as Bob had gotten very angry over her clumsiness.

(5) Mrs. Brown had read an ad in the paper about a sale on dresses. She arrive at the store before it opened. She waited until they opened the store doors and went in and purchased many good bargains.

(6) Kim's mother looked on the calendar and realized Kim was due to have her yearly check-up with the dentist. She made an appointment for the next Wednesday after school. The dentist checked and exrayed Kim's teeth and found everything was fine. She had no cavities.

(7) A movie star made a great deal of money. It was a new thing for him to make so much money. Instead of putting it in a savings account he spent most of it on an expensive home, a yacht, expensive dinners and such. Soon he was not as popular as he used to be and he found he was not asked to make any more pictures or appear on T.V. Because he had spent all his money he could not afford to keep his lovely home or yacht. He had to find another kind of job.

(8) David wanted to go to the football game the next Saturday. Tickets went on sale, but there were a limited amount of tickets being sold as the stadium would hold only so many people. David decided to wait until Wednesday after school to get his ticket as he would be going to Mark's house after school and he could stop in at the ticket agency on the way. The agency was out of his way when walking home on the other days. When Wednesday afternoon arrived he found the game was sold out.

(9) Cynthia had had a bad day. It had rained that morning. She had slipped and fallen in the mud on the way to school. At school she dropped her notebook and all the papers fell out, she had been hit by a ball at recess and at lunch she found her mother had put a fresh egg in her lunch instead of a hard-boiled one. The one bright spot of the day, however, was when she arrived at math class--she found she had made the highest grade on the test yesterday.

(10) Jeff loved playing baseball. He longed to be the pitcher on the class team. He knew he could be a good one, but he never had the courage to ask the boys to give him a chance. Jeff never did get to be pitcher at any time during the season.

(11) Christine had decided to buy her lunch at school today. She was in line. The cafeteria was giving ice cream bars for dessert. While waiting in line some girls crowded in front of her which put her further back in the line. Upon receiving their ice cream bars, the rude girls were disappointed with what the cafeteria gave them. When Christine came to get her bar she found they had run out of the kind she and the other girls didn't like and had started giving out the good kind she loved.

(12) The Smith twins got together and decided to set up a lemonade stand. They made the lemonade, expecting to make a good deal of money and had made plans to spend the money they earned on a tether ball game. They had even gone down town and told the clerk they were coming back the next day to buy it. The lemonade stand did not make enough money that day or even all week to pay for the tether ball.

(13) Sue and Jane were to be color guards for the scout troop at a P.T.A. meeting. They both talked about all the things that could happen during the ceremony, such as dropping the flag, tripping and falling down, or even forgetting what they were supposed to do. They worried about it the night before the meeting and all the next day. When the P.T.A. meeting took place, the girls in the color guard were called in and everything went very nicely. None of the things happened the girls thought might take place.

(14) The class was making a tile mosaic of a California mission. They had the tiles on a rather wobbly table. Some of the boys leaned on the table and it collapsed. They landed on the tiles breaking some of them. Their teacher came over and said all was not lost as they could be fitted and glued together and would still fit into the mosaic.

(15) Roger had become very curious about all the wrapped packages on the shelves in his parents' closet. It was only a few days before his birthday and he knew they were all for him. He couldn't stand it any longer. He got the folding chair from the front room closet and put it up in his parents' closet. He climbed up on it, but as soon as he did it collapsed. He fell, bruising his knee and breaking his left wrist.

**DIRECTIONS:** Try to match the situation to the right proverb. 4.1.C

## PROVERBS

1. A rolling stone gathers no moss. __________
2. Look before you leap. __________
3. Haste makes waste. __________
4. The early bird catches the worm. __________
5. Nothing ventured, nothing gained. __________
6. Where there's a will there's a way. __________
7. A stitch in time saves nine. __________
8. Curiosity killed the cat. __________
9. Don't count your chickens before they're hatched __________
10. All that glitters is not gold.

## SITUATIONS

1. Tim got to the ticket office early in the morning and got a good seat for the game. Bill went to the ticket office late that same afternoon but all the seats had been sold.

2. A new family moving from another city found a lovely new house atop a hill. They called it their "dream home". After they had been there for a short time they found many things wrong with it and decided it was too expensive to live there.

3. Although Joyce didn't feel like it she decided she had better put the trash out for pickup before it started to rain. It soon began to pour and the place where the barrels for trash were usually kept became a sea of mud.

4. John was always active outside school. He liked to learn new things and find new ways of doing something. Jim liked to rush home and watch his favorite T.V. shows.

5. Alan submitted a number for the amount of jelly beans in the jar to the candy store. He was so positive he would win that he went to the sports store and ordered a new baseball he had been wanting. He did not win the contest.

6. On the way to and from school Laura was always careful to look both ways before crossing the street.

7. The candy store put on a contest for the school children. The one who could come the closest to the number of jelly beans in the jar would win $5.00. Mary tried, but Alice wouldn't as she said she never wins anything anyhow.

8. Tim was always asking questions. He wanted to find out about everything and everybody. Today he had to discover what it was his brother was doing in the garage. He stole in there while no one was around to have a look.

9. Betty did not get up when her alarm went off so she had to hurry to get ready for school. She ran all the way so that she wouldn't be late. When she arrived, she found she had forgotten all her homework she was supposed to turn in that day.

10. Steve had a tough math problem to do. He could have waited for the teacher to help him next day. After trying many ways he finally found the solution on his own.

4.1.D

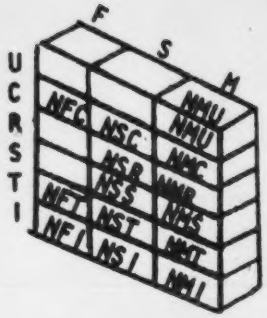
## ANSWER SHEET

### 4.1.A - 4.1.B

C = 1
G = 2
O = 3
A = 4
M = 5
B = 6
H = 7
D = 8
I = 9
E = 10
J = 11
F = 12
K = 13
N = 14
L = 15

### 4.1.C

1 = 4
2 = 6
3 = 9
4 = 1
5 = 7
6 = 10
7 = 3
8 = 8
9 = 5
10 = 2



***Concept*** Convergent Production

***Curricular Objective***

4.2 The child will be able to decipher a given code.

***Input***

Discuss the meaning of symbols with the class. Questions like the following should be asked:

1. What is a symbol? ie: flag represents United States.
2. Can you communicate by use of symbols? How? ie: pirates' poison label uses skull and crossbones.
3. How do you know these symbols stand for what they do? (experience)
4. What had to happen before you could know what these symbols mean? (Agreement)
5. If there was no agreement what would happen? (No understanding of meaning.)

***Learning Opportunities***

I: The teacher shows the class a sentence in symbols on the overhead (4.2.A).

Question:

A: Can you read this sentence? Why not? (No agreement or experience

B: Why don't we use these symbols instead of ordinary English letters? (No understanding.)

C: Could these symbols be used to form a language? (Yes, if agreed upon.)

II: Teacher hands out key to symbolic sentence on overhead (see 4.2.B) and asks children to examine the key.

Questions:

A: Any two symbols alike?

B: Why are they different?

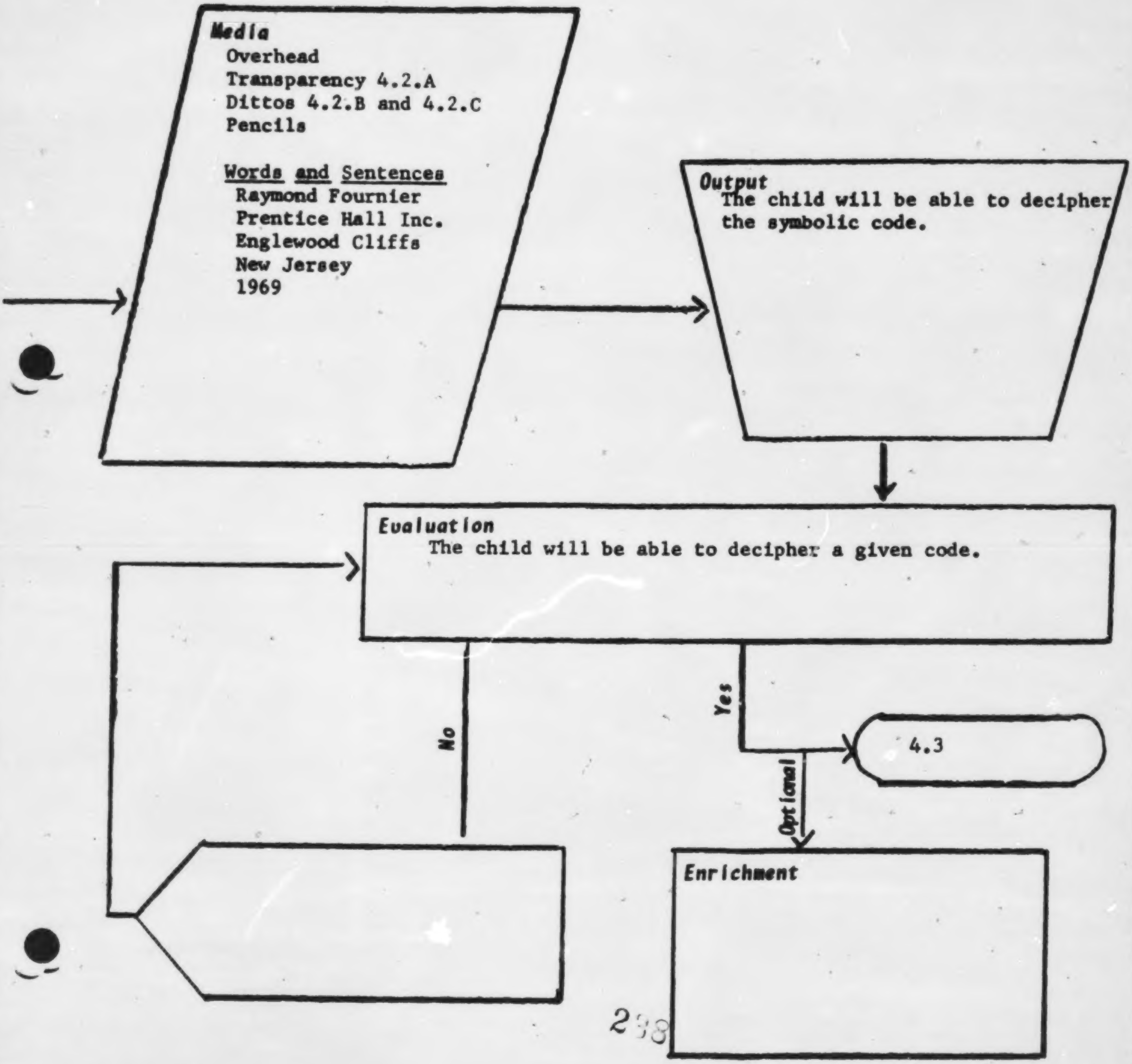
C: What would happen if the same symbol were used for six different letters?

III; The children are given time to decod message on overhead.

IV: The teacher asks the children to mak up their own sentence using the symbols. The children exchange papers to decode each other's sentence.

V: A ditto (see 4.2.C) containing four sentences using the symbols is given each child to decode.

Answer sheet (see 4.2.D)



**Media**

Overhead
Transparency 4.2.A
Dittos 4.2.B and 4.2.C
Pencils

Words and Sentences
Raymond Fournier
Prentice Hall Inc.
Englewood Cliffs
New Jersey
1969

**Output**

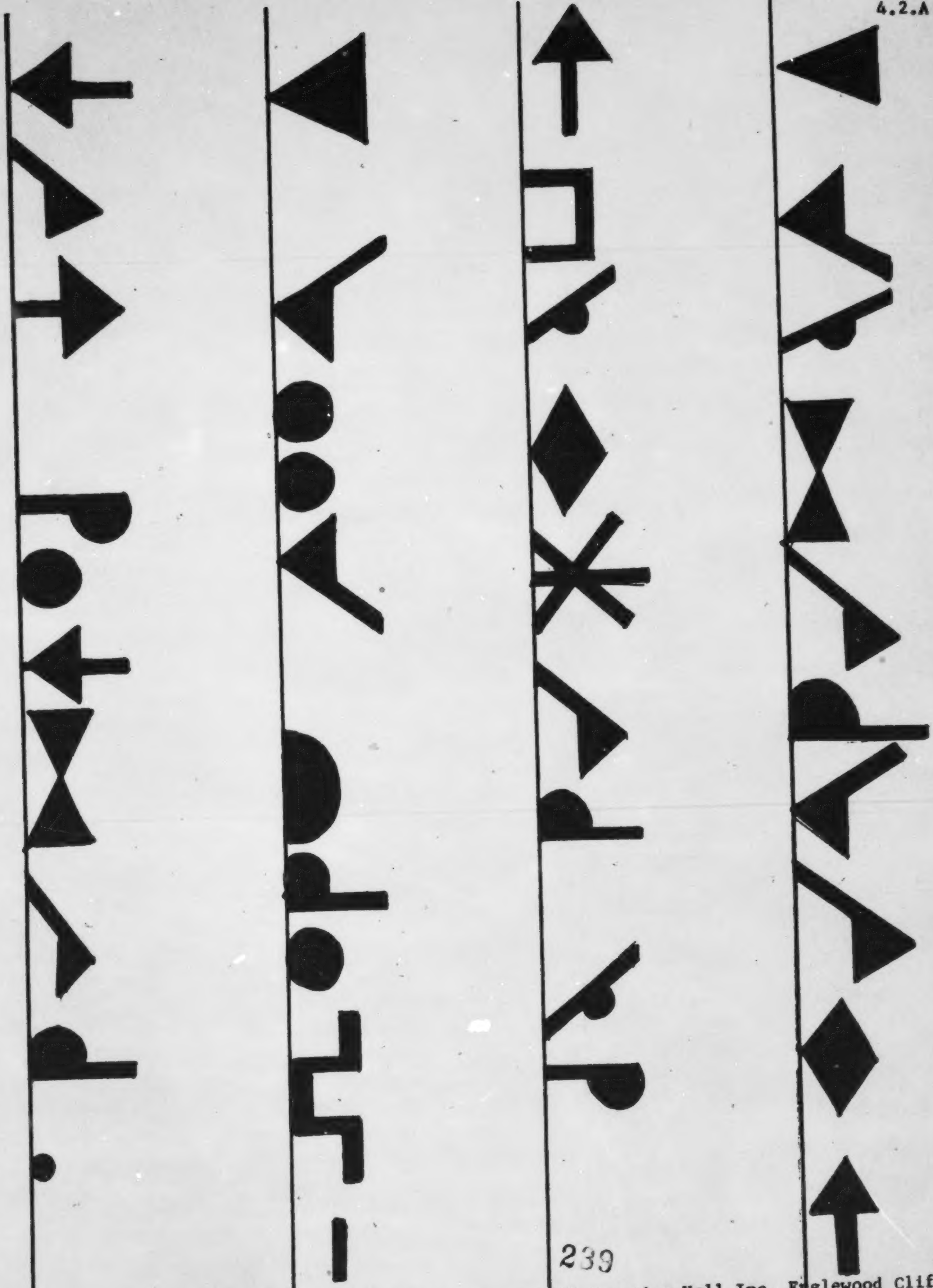
The child will be able to decipher the symbolic code.

**Evaluation**

The child will be able to decipher a given code.

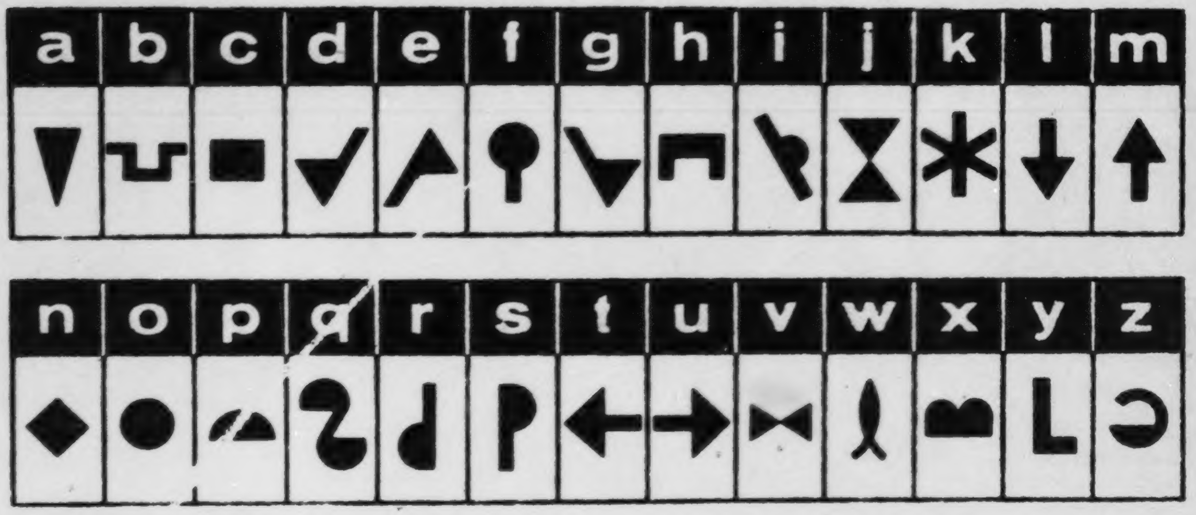
No
Yes
4.3
Optional
Enrichment

4.2.A



From Words and Sentences, Raymond Fournier, C 1969 Prentice Hall Inc. Englewood Cliffs New Jersey

WHAT SENTENCE CAN YOU WRITE WITH THESE SYMBOLS?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SENTENCE ______________________________________________

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From Words and Sentences, Raymond Fournier, C 1969 Prentice Hall Inc. Englewood Cliffs, New Jersey

4.2.C

# WHAT DO THESE SYMBOLS MEAN?

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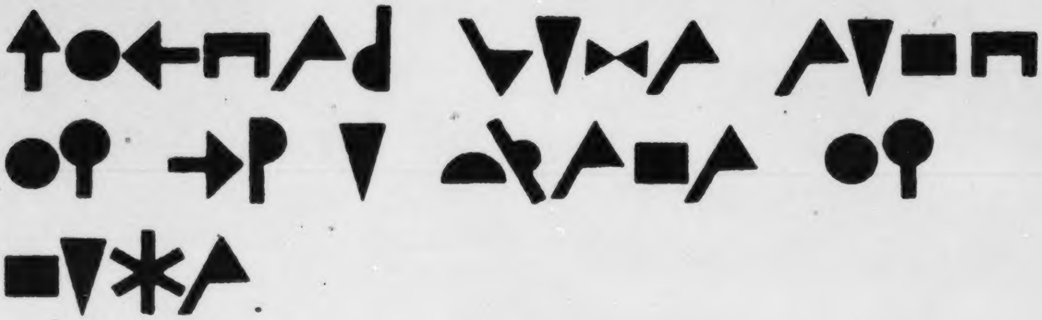

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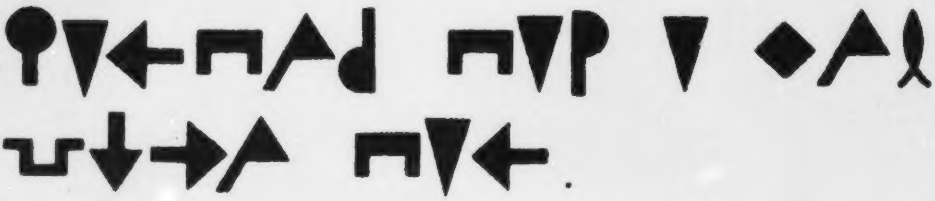

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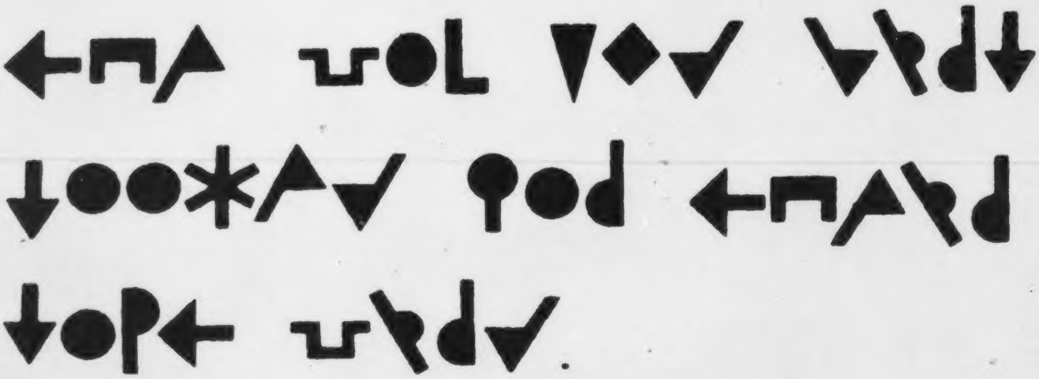

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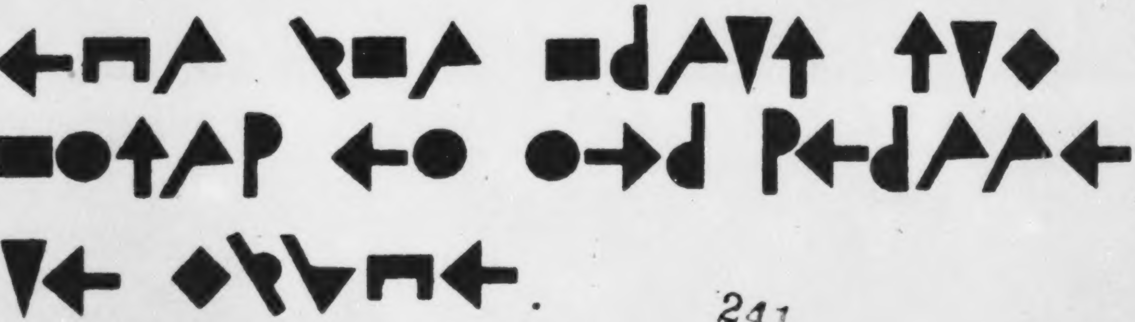

From Words and Sentences, Raymond Fournier, C 1969 Prentice Hall Inc. Englewood Cliffs New Jersey

## ANSWER SHEET

Symbol sentences:

1. Mother gave each of us a piece of cake.
2. Father has a new blue hat.
3. The boy and girl looked for their lost bird.
4. The ice cream man comes to our street at night.

Projectile sentence:

A divergent thinker is a good problem solver.

## ANSWER SHEET

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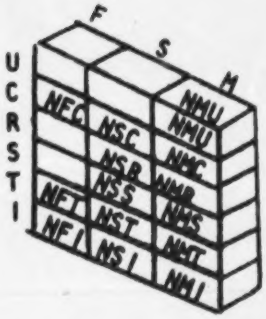


**Concept** Convergent Production

**Curricular Objective**

4.3 The child will be able to recognize and decipher codes using forms of pig latin and numbers.

**Input**

Children should finish Ditto 4.2.C from last lesson before discussion.

Question:

1. If you hadn't used the key would these symbols have had any meaning?

Child writes one or two words on board.

Question:

1. What do the words mean to you?
2. If you had never seen our alphabet would you know the words? Why not?
3. Would a baby know the words?
4. Could you say our alphabet is a code? Who can use it?
5. What other codes do we use besides letters (numbers, pictures etc.)?

**Learning Opportunities**

I: The teacher hands each child the ditto (See 4.3.A) called "The Trick".

A: The children are asked to decipher the code which uses numbers in place of letters.

II: Upon completion of the above paper the teacher hands each child a ditto (See 4.3.B) of a "pig latin" type code.

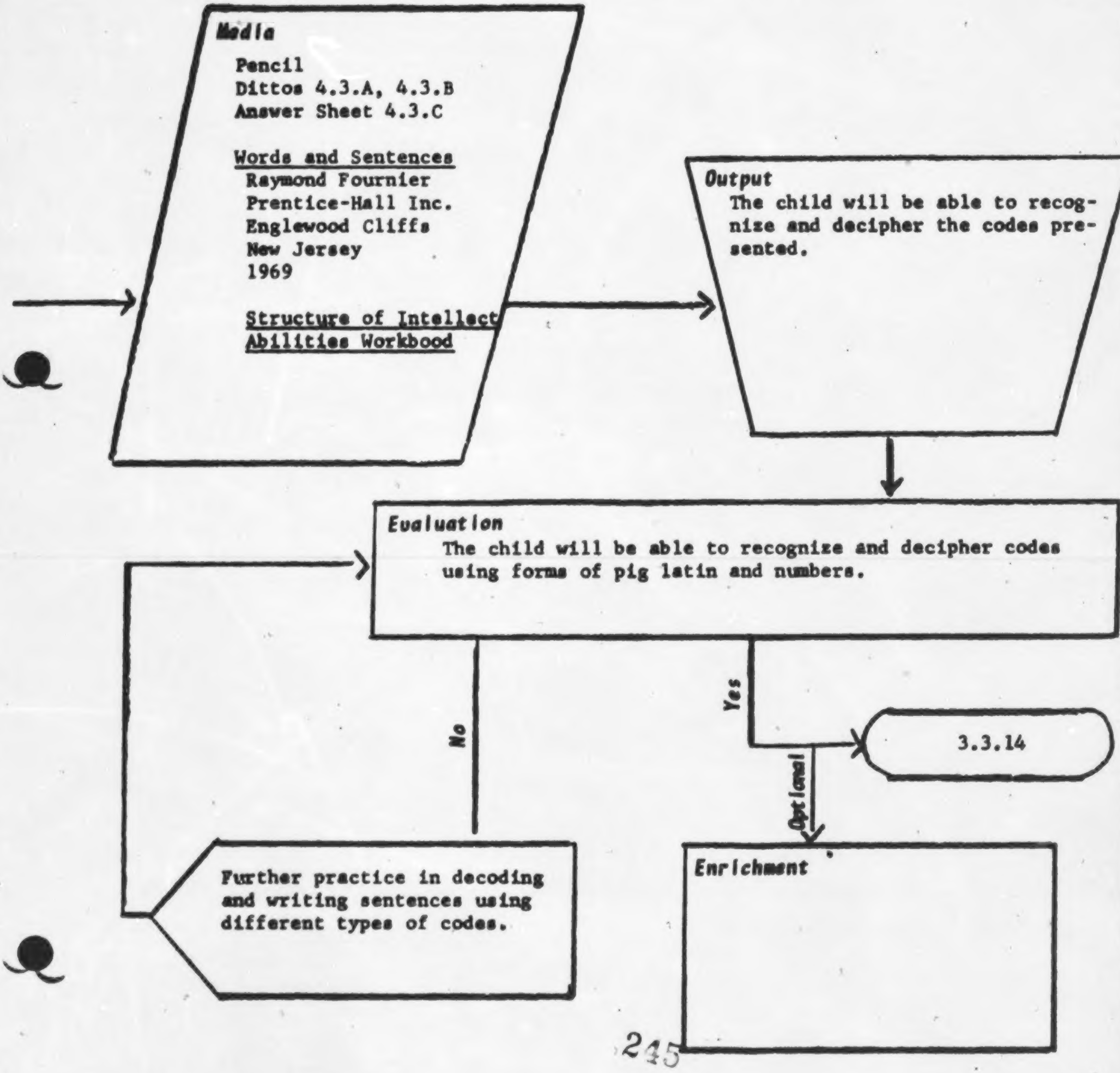
A: This code is more difficult. The teacher may find it necessary to tell the children to look for patterns for all three sentences.

III: Completion of the codes may be followed by questions.

A: How did you know what the words were?

B: Was it easier to decode the second and third groups of words? Why?

Answer sheet (see 4.3.C)



# A TRICK

One ho5 d3y 38 w3n5ed 5o 183y 3 tw64k on h6s f26end, 135. He offered h6m some 64e 4o8d 8emon 3de. When 135 53s5ed 65, he m3de 3 5e226b8e f34e. 38 83ughed be43use he h3dn'5 lu5 3ny sug32 6n 65. 5h35 w3s 3 123456438 joke.

Change the following sentences into ordinary English:

1. O gay o tay the toresay orfay omesay readbay.

2. Arymi and aneji are idingri their ikesbi.

3. The allbo entwo to the oybo with the edro atho.

From Words and Sentences, by Raymond Fournier, Published by Prentice-Hall, Inc.
Englewood Cliffs, New Jersey ©1969

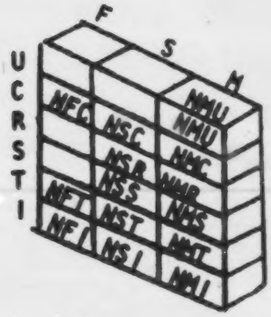
**ANSWER SHEET**

**Pig Latin code:**

1. go
2. to
3. the
4. store
5. for
6. some
7. bread
8. Mary
9. and
10. Jane
11. are
12. riding
13. their
14. bikes
15. the
16. ball
17. went
18. to
19. the
20. boy
21. with
22. the
23. red
24. hat

A TRICK:

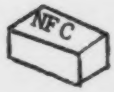
One hot day Al wanted to play a trick on his friend Pat. He offered him some ice cold lemonade. When Pat tasted it, he made a terrible face. Al laughed because he hadn't put any sugar in it. That was a practical joke.



**Concept** Convergent Production

**Curricular Objective**

4.4 Hearing the reading of the physical attributes of wild animals the child will be able to reproduce them and be able to guess what animal is being described.



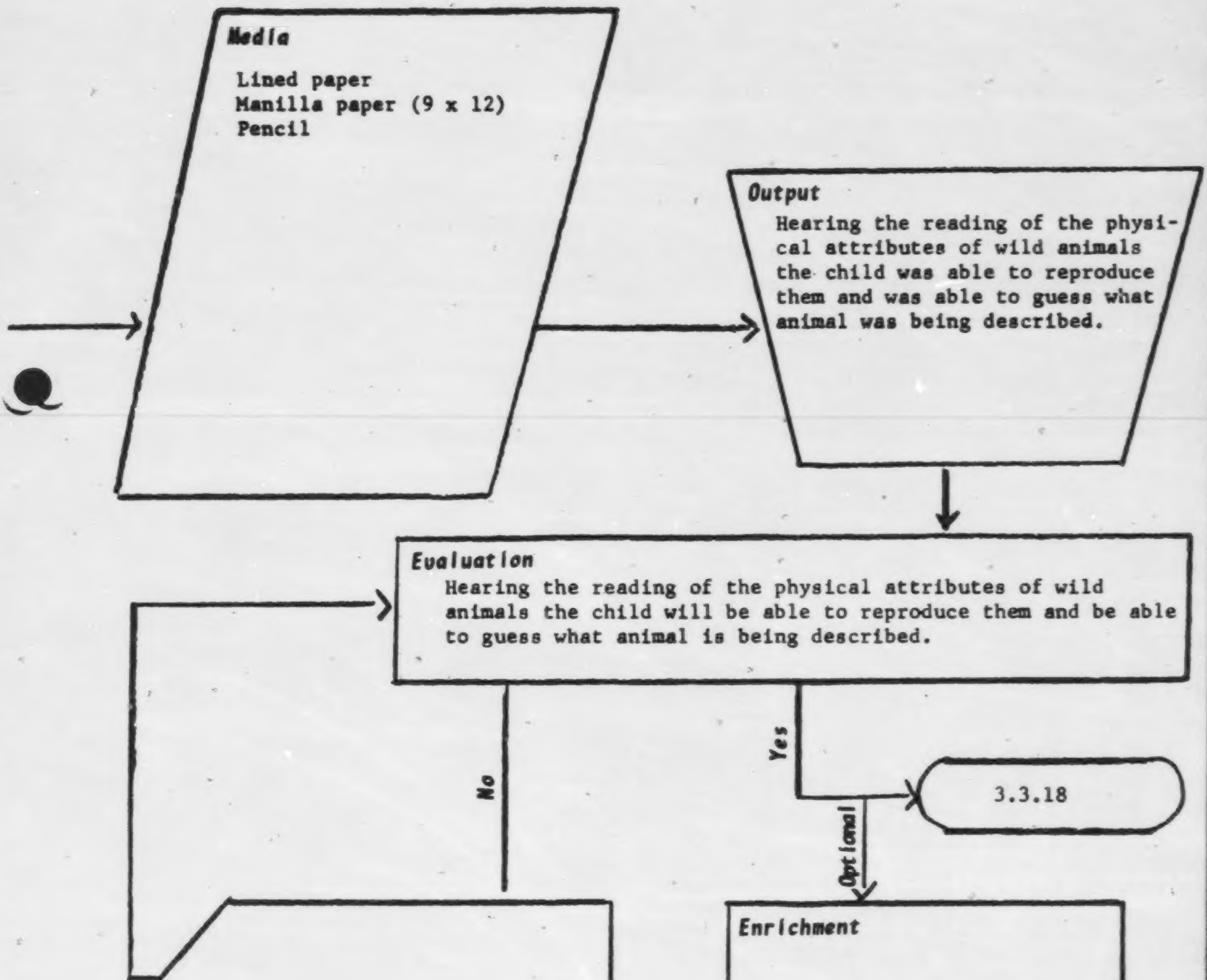
**Input**

The word attribute should be defined. The teacher then selects one or two pupils to come to the chalkboard. Another pupil is asked to think of a wild animal and name its attributes. As the child gives the attributes the children at the chalkboard attempt to draw the animal. The children at their desks are to guess from given attributes and the drawings what animal the child is describing.

**Learning Opportunities**

I: The teacher distributes lined paper to each child in the class.
  A: She asks the class to write a very complete and accurate description of six wild animals remembering that description applies to the animal's attributes.

II: The teacher then distributes a piece of manila paper, 9 x 12, to each child.
  A: The child is asked to fold the paper so that they will have six squares.
  B: Six children in the class are selected to read one of their descriptions.
  C: Those not involved in reading theirs are to try to draw the physical characteristics as read by each child.
  D: At the end the class is to try and guess what kind of animal the children described.



**Media**

Lined paper
Manilla paper (9 x 12)
Pencil

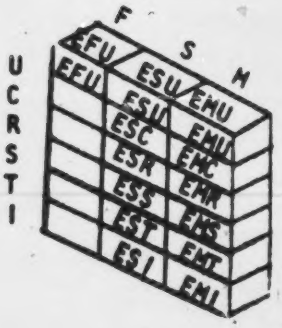
**Output**

Hearing the reading of the physical attributes of wild animals the child was able to reproduce them and was able to guess what animal was being described.

**Evaluation**

Hearing the reading of the physical attributes of wild animals the child will be able to reproduce them and be able to guess what animal is being described.

**Enrichment**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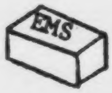
**Concept** Evaluation

**Curricular Objective**

5.1 The child will be able to judge in what way the sentence, and short stories presented, contain faulty information.



**Input**

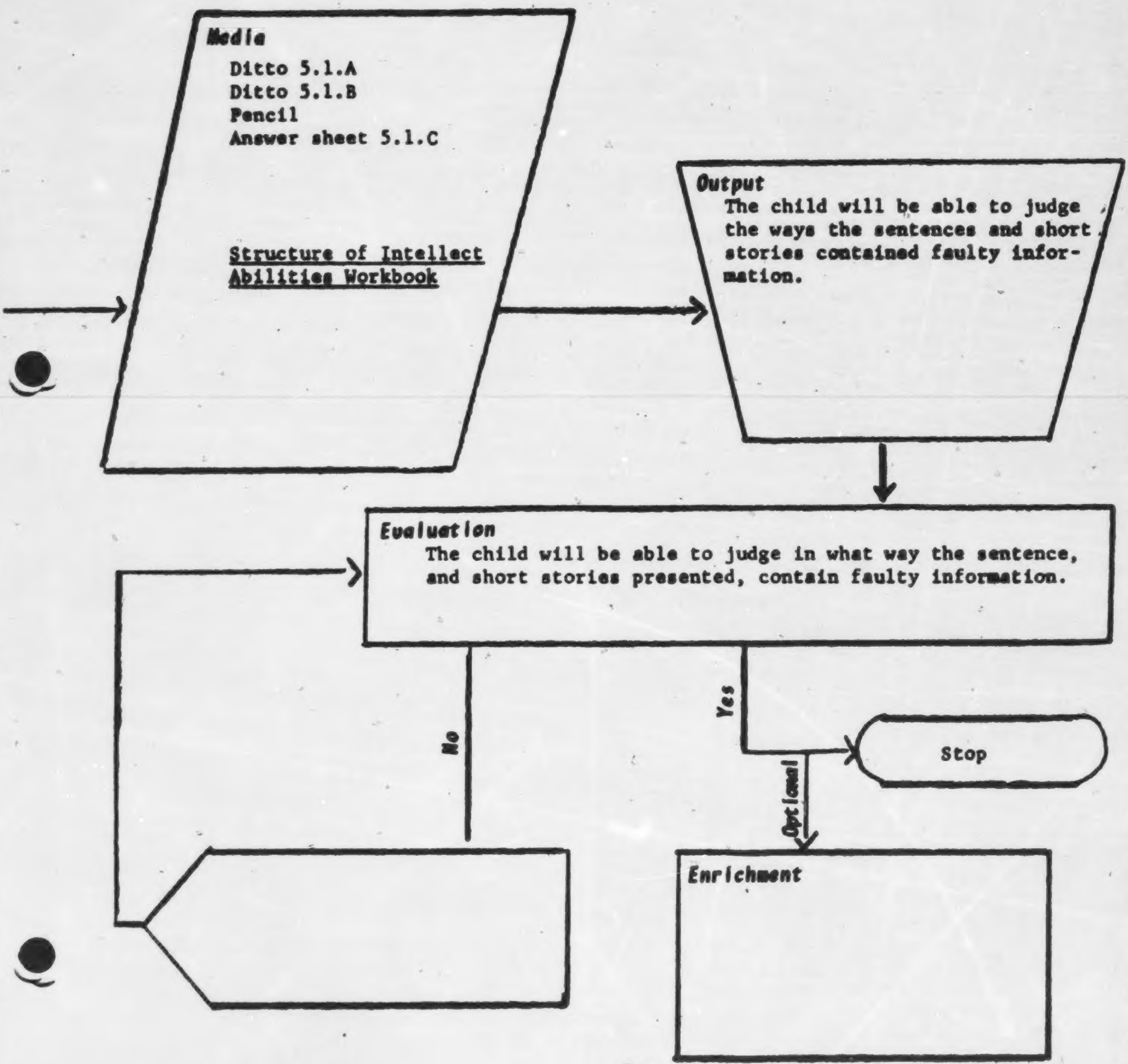
Discuss the term evaluation as a means of looking at a situation to determine what is meaningful and what is not.

**Learning Opportunities**

I: The teacher distributes copies of ditto (see 5.1.A) and instructs the children to cross out those sentences which do not make sense.

II: Following the completion of the above ditto, the teacher gives each child a paper (see 5.1.B) to try to solve the three story problems.

III: Correct and evaluate the children's ideas upon completion of the two papers.



**Media**

Ditto 5.1.A
Ditto 5.1.B
Pencil
Answer sheet 5.1.C

Structure of Intellect Abilities Workbook

**Output**

The child will be able to judge the ways the sentences and short stories contained faulty information.

**Evaluation**

The child will be able to judge in what way the sentence, and short stories presented, contain faulty information.

INSTRUCTIONS:

1. Read the sentences carefully.
2. Cross out the sentences which do not make sense.

1. Jane tore her new dress so her mother took it to the dentist.
2. Matthew, who is seven, had his fifth birthday last year.
3. Margaret and Jim will go to Europe this summer.
4. In 1902 some scientists dug up the remains of a car which they were sure had been Mustang.
5. Mrs. North burned her cake so she put it back into the mixing bowl so she could try again.
6. Mother liked to shop on Fridays because there were fewer people in the store.
7. Allison knocked the vase down and broke it; so she filled it up with water again so no one would know.
8. Billy went to the market for the lady next door so she gave him fifty cents.
9. Sue liked her new bike so she slid down the hill on it.
10. Mary liked to read so she checked some books out of the library.

Indicate in what way the following plan is faulty:

A particular hospital wants to rotate its employees so that each one will have a turn on night duty. Mary Jo is told that each Thursday she is to change shifts, but she will continue to have Sunday off. She is to change from the day shift (8:00 am to 4:00 pm) to the evening shift (4:00 pm to midnight), the following week she is to work the early morning shift (midnight to 8:00 am).

## THREE POSERS

Play detective and see if you can solve this puzzle:

A man who was served a cup of coffee in a restaurant called the waiter back to the table. Pointing to the cup, he said, "There seems to be a fly in my coffee. Please take this cup away and bring me a fresh cup of coffee."

The waiter promptly apologized, picked up the cup of coffee and took it away. He returned with a cup of coffee that had no fly in it. But when the customer tasted the coffee, he declared, "This is the same cup of coffee I had before!"

How did he know?

* * * * * *

A medieval magician, carrying a bottle of liquid, approached the throne of his king.

"Sire," the magician said to the monarch, "I have here a most magic liquid. Such is its power that it will dissolve anything it touches."

"Anything?" asked the king.

"Anything!" replied the magician.

But the king knew that the magician was mistaken. How did he know?

* * * * * *

A cannon ball is dropped from the top of a tower 250 feet high. At the same instant, another cannon ball of the same size and weight is fired horizontally (straight out) from a cannon.

Which cannon ball will reach the ground first?

* * * * * *

## CLEAN AND DIRTY

Two white workmen were repairing a roof. They fell through a large chimney and landed in a fireplace on the floor below.

Both men arose unhurt. They looked at each other, walked around the room, stretched their arms and realized that they had sustained no injuries. Without speaking a word or discussing their sudden fall, both men started back to the job.

Now it happened that one man's face was well smeared with soot from his passage through the chimney. The other man's face, however, was absolutely clean.

Yet the man with the clean face went and washed his face; the man with the dirty face went back to work without washing his face!

Can you explain, logically, why they did this?

## ANSWER PAGE

**Hospital Plan:** This plan is faulty because the second week Mary Jo would have no opportunity to sleep since she would have to work the day shift on Friday.

Poser No. 1: The man knew it was the same cup of coffee because he had put sugar in the coffee before he found the fly in it.

Poser No. 2: The king knew the magician was mistaken, because if the liquid dissolved everything it touched, it would dissolve the bottle, too.

Poser No. 3: Both cannon balls will reach the ground at the same time. Gravity acts on each one in the same way, so each one will approach the ground at the same rate.

Clean and Dirty:

The workmen looked at each other. The first man saw that the other's face was dirty, hence he assumed that his own was dirty also. The man with the dirty face saw the clean face of his companion and supposed that his own was clean. Thus the man with the clean face washed and the man with the dirty face did not.

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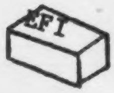
**Concept** Evaluation

**Curricular Objective**

5.2 The child will be able to decide which squares will go together to make a puzzle picture.



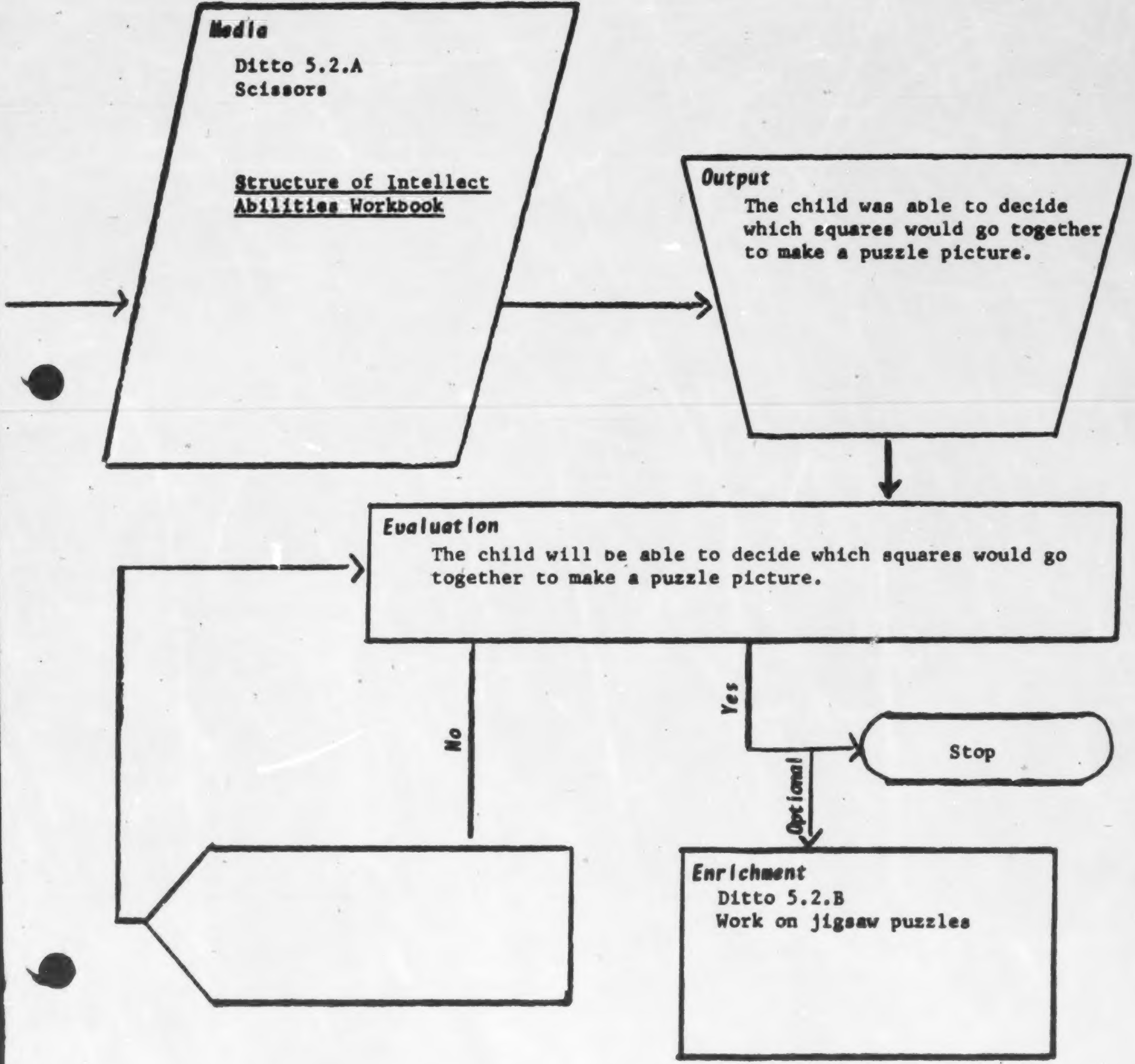
**Input**

Review the term evaluation as being able to judge the consistency or adequacy of a situation. Emphasize too, that the term evaluation can be applied when we are trying to determine what lines put together will complete a given form such as in a jigsaw puzzle.

**Learning Opportunities**

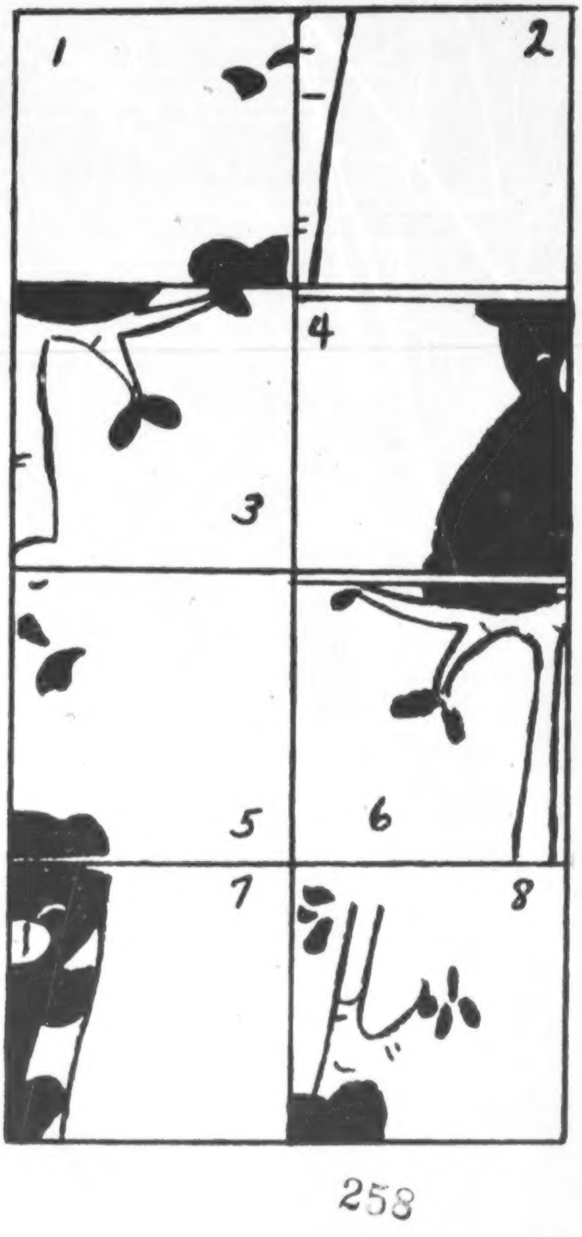
I: The teacher will distribute copies (See 5.2.A) to the children.

A: Instruct the class to follow the given directions on the paper to arrive at a given form.


Media
Ditto 5.2.A
Scissors
Structure of Intellect Abilities Workbook
Output
The child was able to decide which squares would go together to make a puzzle picture.
Evaluation
The child will be able to decide which squares would go together to make a puzzle picture.
No
Yes
Stop
Optional
Enrichment
Ditto 5.2.B
Work on jigsaw puzzles

Directions:

1. Cut the squares apart.
2. Decide which of the squares would NOT go together to make a puzzle picture.
3. Put the squares together to make a puzzle picture.

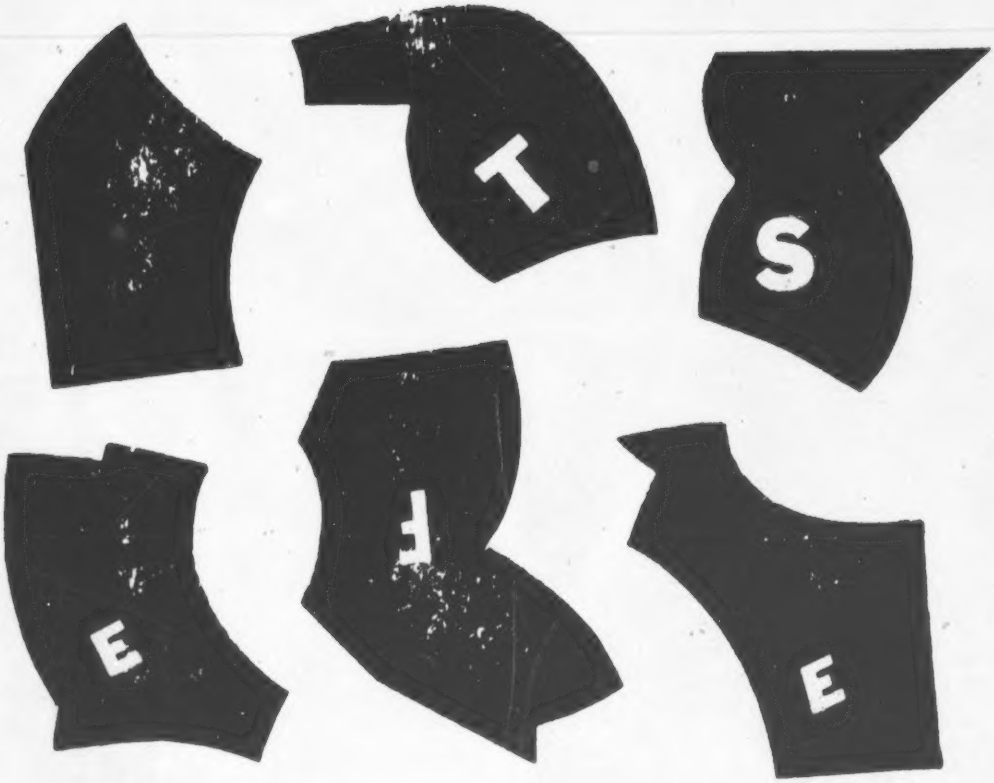


# SECRET MESSAGE

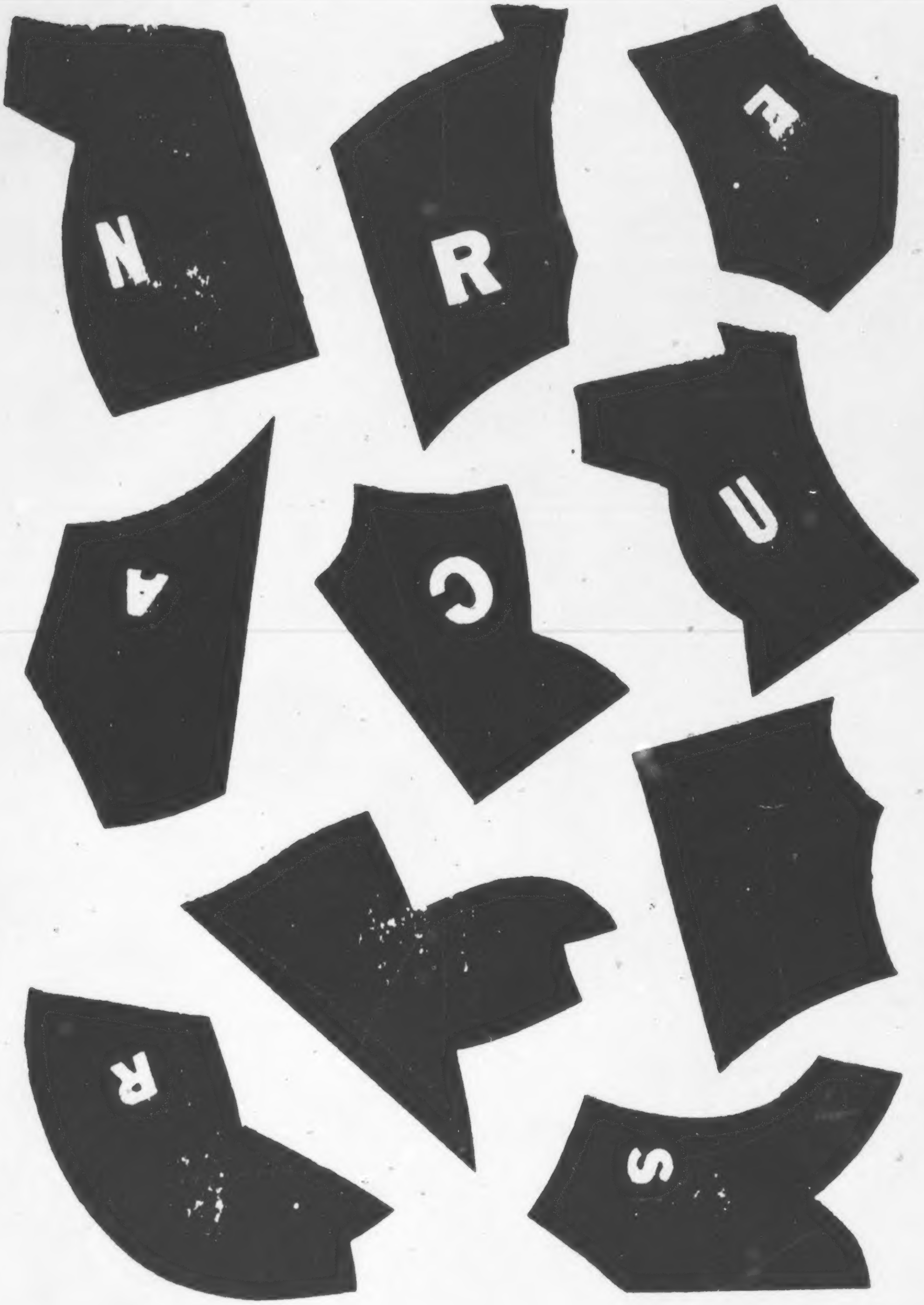
## Rainy Day Game

There's a secret message on the pieces of paper on these two pages. Cut out the pieces, fit them together, and you will learn what that message is.

The shape formed when all the pieces are put together will be like this:



From Doubleday Activity Book, Doubleday and Co., Inc.



From Doubleday Activity Book, Doubleday and Co., Inc.

# ANSWER SHEET

SECRET MESSAGE - 5.2.B.: "SECRETS ARE FUN"

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EMC
EMR
EMS
EMT
EMI

**Concept** Evaluation

**Curricular Objective**

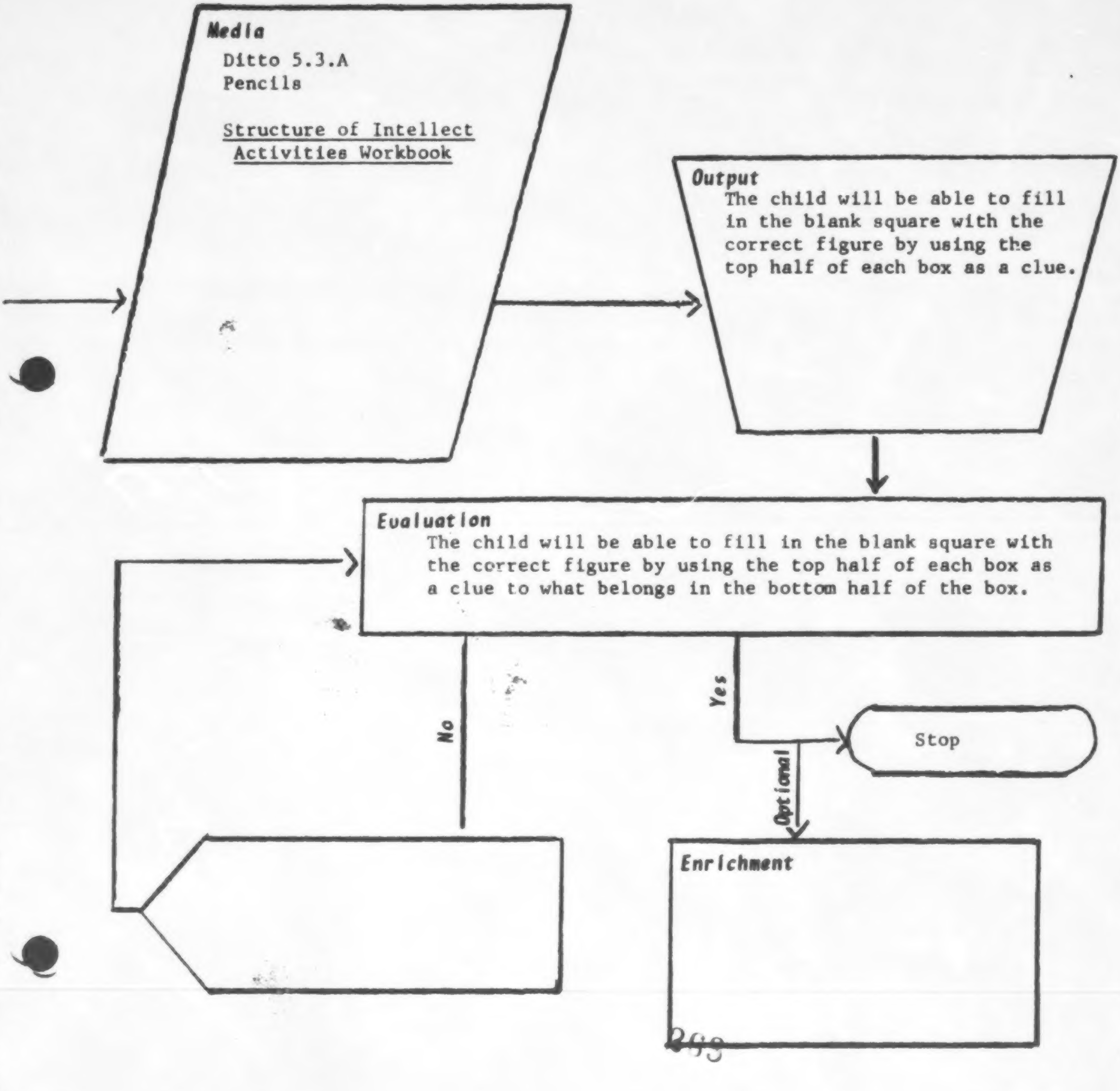
5.3 The child will be able to fill in the blank square with the correct figure by using the top half of each box as a clue to what belongs in the bottom half of the box.

**Input**

Review evaluation. Discuss its importance in everyday life, not only in given situations where we judge others and events, but also the importance of judging our own actions and self and how we come over to other people. Through training we can learn to evaluate effectively.

**Learning Opportunities**

I: The teacher distributes copies of ditto (see 5.3.A) to the children.
  A: The children are asked to study the four items in the box. The figure in the top half of each box is a clue to what belongs in the bottom half.
  B: A few examples of the exercise might be put on the board and done by the class as a whole.
  C: The children fill in the blank square with the correct figure.


Media
Output
Evaluation
No
Yes
Stop
Optional
Enrichment

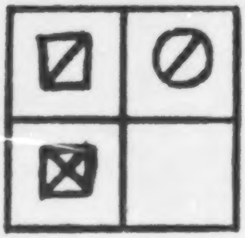
Ditto 5.3.A
Pencils

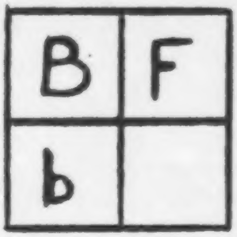
Structure of Intellect Activities Workbook

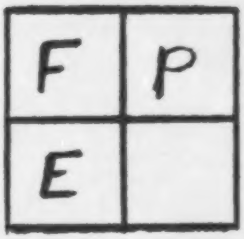
The child will be able to fill in the blank square with the correct figure by using the top half of each box as a clue.

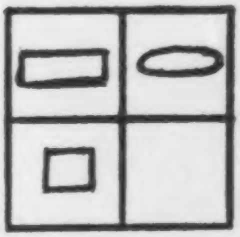
The child will be able to fill in the blank square with the correct figure by using the top half of each box as a clue to what belongs in the bottom half of the box.

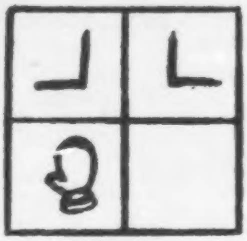
Study the four items in the box. The figure in the top half of each box is a clue to what belongs in the bottom half.

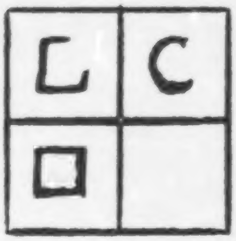


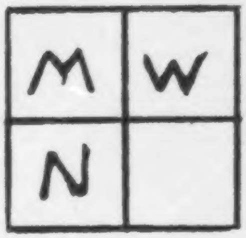


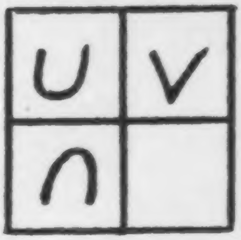


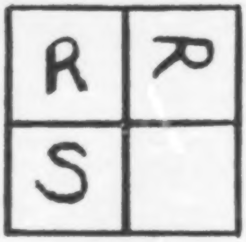


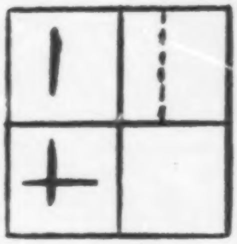


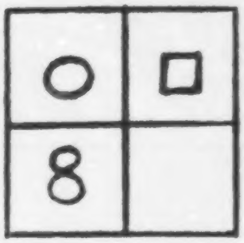


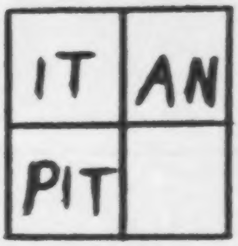


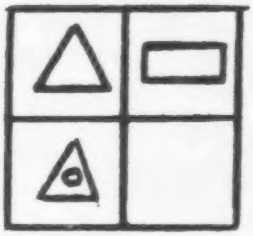


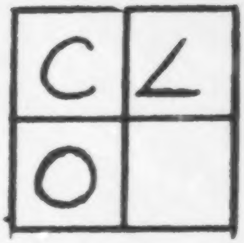


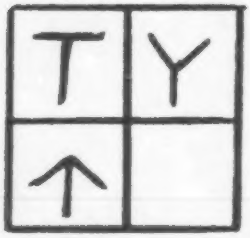


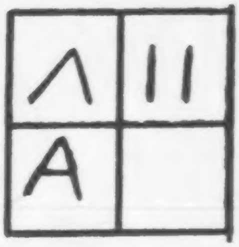












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